Lectures
ON THE
PHYSIOLOGICAL PATHOLOGY OF THE BRAIN.

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LECTURE I.—PART IV.

ON A GREAT VARIETY OF FORMS OF PARALYSIS DUE TO DISEASE IN ONE SIDE OF THE BRAIN.

Conclusions from facts previously mentioned, showing, in opposition to admitted views, that not rarely paralysis has occurred when there was no lesion of the supposed cerebral motor centres or conductors, or has appeared where it should not have shown itself, or also has not occurred when it should have existed—Two cases that the admitted views cannot explain—One or two lesions in one side of the brain may cause paralysis first in the corresponding then in the opposite side of the body—Two cases of considerable alteration of one of the posterior lobes of the brain, producing paralysis in one on the same side first and then on the opposite side, and in the other just the reverse—One or two lesions in one side of the brain may cause paralysis first in the opposite, then in the corresponding side of the body—Answer to possible objections as regards the value of the facts just mentioned—Causes of paralysis in cases in which no organic disease is found in the brain or other parts of the nervous system.

I HAVE insisted on the tendency of paralysis to appear rather in one than in the two sides of the body, in cases of disease equally extensive in the two halves of the brain; and still more to show itself in the limbs on the side of the greatest lesion in the brain, when its two halves are unequally altered. Those cases are certainly quite in opposition to the admitted views; but there are a great many cases of lesion of the two sides of the brain in which paralysis, appearing on the side opposite to that of the greatest cerebral lesion, seems to be in harmony with the requirements of the admitted views. It may be that it is so when the lesion is not within the track of the conductors, between the psycho-motor centres and the muscles, or in one of these supposed centres (although why, I will ask, is there a paralysis then?); but it is not so when the lesion destroys part of that supposed track on the two sides, or when it occupies a pretended psycho-motor centre on each side of the brain. There are many such cases on record, in which the two corpora striata or the two sides of the pons Varolii were unequally diseased. I will give a summary of the most striking of these cases in another lecture, when I examine the peculiar features of production of paralysis in each part of the brain.

Before passing to another argument it is essential to show what is the significance of the cases I have spoken of. The three following decisive objections against the admitted views flow out from these facts:—

1st. That in those cases where disease has existed in parts of the brain which are not considered as psycho-motor centres or as belonging to the motor track, *paralysis should not have appeared* either in the limbs on the side most altered in the brain, or in those of the opposite side.

2nd. That in those cases where nearly the same extent and kind of disease has existed in the two sides of the brain, in parts which are considered as psycho-motor centres or as belonging to the motor track, *paralysis should have appeared with nearly the same intensity in the two sides of the body*, and not simply in a limb or in both limbs on one side, as was observed.

3rd. That in those cases where disease was more extensive in one side of the brain than in the other, *paralysis (or the most marked paralysis) should invariably have appeared in the limbs on the opposite side to that of the greatest brain lesion*, instead of occurring, as often was observed, in the limbs on the side corresponding with that of the most considerable lesion.

These conclusions may be considered by those who yet admit the old views as not being quite well grounded. It may be objected that the means employed to detect paralysis or to ascertain its absence in the cases I have mentioned or alluded to were not such as to leave no doubt as regards, on the one hand, the degree of an existing paralysis, or, on the other hand, the complete absence of any paralysis. I certainly will not say that those cases have been as well observed as possible. On the contrary, no one can be more disposed than I am to find fault with observers or reporters who do not give all the features of a case, and do not state how and when they have made out the two points above mentioned—viz., the degree of paralysis and the non-existence of paralysis. I certainly blame, as much as anyone can do, writers who are satisfied that a paralysis is complete simply because, in a comatose patient, a limb falls heavily, if allowed to, after having been lifted up, or (which is much more faulty) that there is no paralysis when a lifted limb does not fall heavily.* Indeed, I am convinced that one mistake at least has been committed in many of the cases I have alluded to or mentioned. That mistake consists in not having found out that the limbs considered as free from paralysis were at least slightly paralysed in every case in which there was on the other side of the body a complete hemiplegia. I will return to this hereafter when I try to show that a disease, wherever located in the brain, in one or in both sides, seems to be unable to produce a complete hemiplegia without some paralysis on the other side. I am ready to admit that it is likely that more—and even much more—than a very slight paralysis has often existed in cases such as I have so far spoken of; but this admission, if it makes some of the facts I have mentioned disagree somewhat less with the received views, does not change their meaning, so as to make them agree with those views. It is even clear that this admission does not in the least impair either of the three conclusions I have just given.

I am perfectly aware that in the cases I have mentioned other lesions may have existed besides those which have been seen. I do not think the time will ever come when it will be possible, without more labour than can be bestowed on any individual case of disease, to find out that a brain is everywhere perfectly healthy except at certain places. But is it essential for the three conclusions I have drawn that there was no other lesion than that found? It is so, perhaps, for some of the cases that have led to the first of those conclusions, and also, but hardly so, for some of the cases on which the third of those conclusions is grounded; but not so at all for the cases bearing out the second conclusion. A good many circumstances may quite legitimately, as I have shown elsewhere,† tend to prove that the lesion we find after death is the one that has produced the symptoms we have observed. I will only now say that if, for instance, we find a hæmorrhage in the brain when the ordinary apoplectic phenomena have existed, it is almost certain that a paralysis, beginning at the time of the apoplectic seizure, is, like the other symptoms, an effect of the irritation caused by the tearing and pressure of the cerebral tissue by the effused blood. If, then, we have the chance of soon making an autopsy, we see what is the organic primitive cause of the paralysis, and we have no need of imagining the existence of another and unseen lesion. Some of the cases I have mentioned were of that kind, and so is the following case, which I now quote as bearing on the point now discussed. That case was published by Dr. Parra d'Andert.‡

CASE 6.—A man lost consciousness, and became hemiplegic on the *left* side (limbs, face, and tongue affected). Before dying he lost power also in the right side, surviving only about twenty-four hours. There were clots of blood in the *left* crus cerebri and the cerebellum; the *left* optic

* I agree fully with remarks recently made by a very able London surgeon, Mr. John Gay (THE LANCET, August 5th, 1876, p. 187), when he suggests that other means should be used than that above mentioned to find out if there is a paralysis; but I fear that the movements of any kind that may follow the irritation of a limb by galvanic shocks, however useful that test may sometimes be, cannot generally give decisive proofs of the existence or the absence of a paralysis.

† THE LANCET, Jan. 15th, 1876, p. 79.

‡ Inaugural Dissertation. Paris, 1831. p. 23. Quoted by Gintrac, loc. cit. vii., p. 233.

thalamus and *left* corpus striatum were destroyed; so was the septum lucidum, and blood was found in both lateral ventricles. In this case it seems evident that a hæmorrhage in the *left* crus cerebri and in the *left* cerebral ganglia produced at first the *left* paralysis of the face, tongue, and limbs, and that the paralysis extended to the right limbs when, the septum being torn, the blood that had entered first the left lateral ventricle went into the right one.

Before concluding what I have to say of the appearance of hemiplegia in cases of disease in the two sides of the brain, I will ask how cases like the following can be explained by the old views?

CASE 7.—A patient had *left* facial paralysis, stiffness of the *right* arm and *right* hemiplegia. There was equal alteration of the pons Varolii on the two sides; a tumour, size of a walnut, on each side; there were also seven tumours in the cerebellum, one in the *left* optic thalamus, one in the *left* posterior lobe, and another on the surface of the brain.

In this case, published by Albers,* if you tried to explain symptoms with the help of the old views, you would soon be stopped. Of course you can say that the tumour on the left side of the pons Varolii had produced the left facial paralysis, and that the same tumour, or that of the left optic thalamus or of the left posterior lobe, had caused the right hemiplegia; but what then of the alteration of the right half of the pons Varolii, which must have been very nearly if not quite the same as that of its left half, as the two tumours pressing on that nervous centre seemed to be alike in nature, size, and seat?

I now pass to another argument.

2. *Hemiplegia may appear at one time in one side, at another time in the other side, caused by two successive lesions in but one side of the brain, or by a single lesion.* The appearance in the same individual of an attack of *direct* paralysis, and, after a more or less complete cure, of an attack of *crossed* paralysis, is most important in showing that we are not to look upon direct paralysis—i. e., paralysis in the same side as that of the brain lesion—as depending upon the supposed absence of decussation of motor conductors. The facts I will now mention are of two kinds—those in which the first paralysis was a direct one, the second a crossed one, and those in which the crossed paralysis was the first that occurred. The number of cases in which the first paralysis was the direct one is larger than that of cases in which the first paralysis was a crossed one.

In several cases in which there were successively a lesion of the cerebellum and of the brain proper there was at first paralysis on the side of the alteration, then a paralysis on the opposite side. As an instance of this kind I will mention a case of Tavernier,† a case attributed to Cruveilhier by Abercrombie.‡ A patient had an attack of apoplexy followed by *left* hemiplegia, with difficulty of speech. He was cured of the paralysis in four months, but his speech remained difficult. In a second attack he was suddenly deprived of speech and of motion of the *right* limbs, and soon died. Two lesions only were found, an old one, a cyst, half an inch in diameter, in the *left* lobe of the cerebellum, and a new one, a clot, in the anterior part of the *left* middle lobe, outside the corpus striatum and optic thalamus.

In this case the lesion in the cerebellum seems to have caused the *left* hemiplegia and the cerebral lesion the *right* hemiplegia. Both lesions were on the same side—the *left*. I will not mention other cases of the same kind—i. e., with paralysis first produced on the side of a lesion in the cerebellum,—as it is well known that of all the parts of the encephalon the cerebellum is one of those which most often is the cause of a direct paralysis.

In a case of Thouret's,§ remarkable in many respects, a patient had three attacks of *right* hemiplegia, lasting only from one to three months. Each attack was preceded by and accompanied with convulsive jerkings of the *left* thigh. Two or three weeks before death he was attacked with *left* hemiplegia. In this last attack, as well as in the three preceding, he lost his speech. The *right* corpus striatum, which was irregularly depressed, and the *right* optic thalamus, were found much smaller than the left ones. In the *right* centrum ovale, above and on the outer side of the lateral ventricle, there was a yellow softening extending to the convolutions.

In this case, the old lesions, which had produced the *right* hemiplegia and jerkings of the *left* thigh, were in the *right* corpus striatum and the *right* optic thalamus, and the new lesion, which caused *left* hemiplegia, was in the *right* centrum ovale.

Dr. Bauchet* has recorded a case of fracture of the *right* parietal bone, which at first produced paralysis of the right arm, then of the *right* leg, and at last of the *left* leg. There was a considerable effusion of blood from the tearing of the right meningeal artery, and the brain was depressed. There were also two small effusions of blood in the *right* anterior lobe. All the lesions were in the right side of the brain, and paralysis, having first occurred on that side, appeared on the other also.

I shall have the opportunity, for other purposes, of mentioning a number of other such cases in this course of lectures. I will now only give one more case of paralysis first occurring on the same side as that of the brain-lesion and then on the other side. This case is very remarkable, especially when put face to face with another due to the same observer (Mr. G. W. Callender)†. In the first of those cases a tubercle the size of an orange, springing from the dura mater, pressed upon the surface of the cerebrum, the posterior lobe having wasted before it. In the second case the *left* posterior lobe (the same as in the preceding case) contained an abscess the size of a billiard ball, full of greenish pus, the brain-tissue around it being soft. So that there was in these two cases considerable alteration of the *left* posterior lobe, the paralytic symptoms being, in one of them, weakness at first of the *left* arm and hand, then of the *left* foot, and at last of the *right* hand; while in the other one there was at first partial loss of power over the *right* limbs, and then in the *left* arm also.

It may be said about the last case that the abscess produced the usual crossed paralysis on account of a pressure on the back part of the *left* cerebral ganglia; but how, then, was it that at least as great a pressure on the same ganglia —that exerted by a tumour the size of an orange—gave rise to a direct paralysis? It may be said that in the second of those cases the paralysis which appeared last (that of the *left* arm) was direct only in appearance, and that it came from a pressure (which must have been only slight, owing to the resistance of the falx cerebri) on the right posterior lobe. But what then of the effect of a similar pressure in the first case, in which the paralysis which appeared last was in the *right* arm—apparently a crossed paralysis, the tumour being in the *left* posterior lobe? And how can it be, also, that a slight pressure upon the inner surface (that in contact with the falx cerebri) of the posterior lobe not only would produce in one case a direct, in another a crossed paralysis, but could at all produce a paralysis, as, according to the admitted theories, that part of the brain is neither a psycho-motor centre nor a place of passage of motor conductors?

Besides one of these two cases of Mr. Callender's, there are many in which lesions in one half of the encephalon produced successively, first a paralysis on the opposite side, then a paralysis on the same side. I will only mention one or two cases.

A soldier was attacked with vertigo and weakness of the *left* limbs. Shortly after he lost consciousness for a time, and was paralysed on the *right* side. There was an encysted abscess in the *right* posterior lobe and a similar one in the *right* central ovale, which had burst into the lateral ventricle.‡ In this case no other lesion was found to explain the slight crossed paralysis (in the *left* limbs) but those two abscesses; and as regards the attack of apoplexy followed by *right* hemiplegia, the bursting of the abscess of the *right* centrum ovale into the lateral ventricle must be looked upon as having caused it. This is, therefore, a very good case of *direct* paralysis,§ followed by *crossed* paralysis, from lesions limited to parts of one half of the brain.

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* In Symptomat. und Diagn. der Hirngeschwülste, von Ludame. 1865. p. 280.
† Thèse inaugurale, Paris, 1825, p. 30.
‡ Loc. cit., p. 265.
§ Journal Hebdomad. de Médecine, 1828, vol. i., p. 439.

* Bulletins de la Soc. Anatomique, 1852, p. 452.
† St. Bartholomew's Hospital Reports, vol. v., 1869, p. 5. Cases liv. and lv.
‡ Albers of Bonn, in Gazette Médicale de Paris, 1835, p. 614.
§ Since the time I published in THE LANCET (Jan. 1876) a long lecture, grounded on more than 200 cases, to establish that a direct paralysis can be caused by disease in any part of the brain, I have collected from various sources a number of other cases having a clear meaning in that respect. I shall soon have the occasion of mentioning some of them.

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A patient who had had two attacks of apoplexy followed for a time by hemiplegia, in the first instance in the *right* side, in the other in the *left* side, died after having been delirious. Three cysts were found in the posterior and internal part of the *left* hemisphere, containing a blackish, hard substance, which was chemically ascertained to be dried-up blood. The surrounding brain-tissue had become exceedingly hard, almost cartilaginous or even bony.*

These cases, and all like them, are certainly more or less subject to the objection that the lesion that produced paralysis was an unfound one, and not that or those that were found. This is a very easy way of getting out of the embarrassment these cases must give to persons holding the views that I consider as radically false. I admit, however, that this objection can find very good ground in facts such as those in which no disease was found in the brain, although symptoms of apoplexy followed by paralysis had existed. The value of those facts I will discuss by and by, and I hope to be able then to show that in those exceptional cases in which no alteration was found in the brain, or only some œdema, or some serous effusion under the arachnoid or in the ventricles, or a more or less considerable vascularisation, or even also a state of general anæmia, there was in most, if not in all, of such instances a visceral affection, especially of the liver, the kidneys, or the spleen, acting in two ways on the brain—an irritation of the nerves of the diseased viscus, and an alteration of the blood. I can say that the state of the abdominal viscera, when it is mentioned in the record of the cases I have made use of, was not such as to give rise to the supposition that those cases belonged to the class of facts in which no disease was found in the brain, although cerebral symptoms had existed.

Besides, the objection that an unseen lesion of the brain was the real cause of the paralytic symptoms manifestly cannot apply to cases like those of Mr. Callender, of Dr. Bauchet, and of some other observers. It is clear also that when we see in an autopsy that an abscess has burst, and that the pus has entered the lateral ventricle, in a patient (as in the case of Albers) in whom the symptoms were in harmony with such a morbid state, except as regards the appearance of paralysis, which is on the wrong side—i.e., the side of the lesion,—we are entitled to conclude that the cause of the paralysis was truly where we find disease.

* Trochon in Bulletins de la Soc. Anatom., 1840, p. 137.

Clinical Lecture
ON
STRICTURE OF THE URETHRA.

Delivered at the Liverpool Royal Infirmary,

BY REGINALD HARRISON, F.R.C.S.,
SURGEON TO THE INFIRMARY.

GENTLEMEN,—The practice of this infirmary affords you abundant opportunities of observing the surgical disorders of the genito-urinary system, and of these cases of stricture of the urethra and the complications arising out of it form no inconsiderable proportion. Associated as I have been for some years with two of the hospitals in this town deriving a large number of their patients from the seafaring population connected with the port, my observation leads me to believe that amongst this class of the community stricture is a common disorder. And that it should be so is not surprising. Gonorrhœa, contracted on shore, in the debauch that frequently precedes the vessel's departure for some foreign part, breaks out two or three days afterwards. Treatment, except in the case of certain passenger vessels, is usually conducted by the captain or his mate, and not always with advantage to the patient. The old notion that every disorder consequent on promiscuous intercourse is "venereal," and must be treated by mercury, still prevails; and large doses of calomel, until profuse salivation is produced, is not rarely the only remedy administered for a gonorrhœal discharge. Some of the worst cases of stricture that I have seen have been occasioned, under similar circumstances, by resort to the most primitive proceedings for the relief of retention of urine. In the absence of catheters from the ship's medicine-chest, or still more frequently, as I have found, from their rottenness, I have known instances where the wire from a soda-water bottle and an iron skewer have done duty in "forcing" a stricture. It is only a short time ago when a man was admitted into No. 1 ward with retention and a badly lacerated urethra, as a consequence of an attempt on the part of the mate of his ship to reach the bladder by the aid of a pointed piece of wood, roughly modeled to the shape of a bougie. In this instance the mate was more than professionally interested, inasmuch as he had occasioned the retention by kicking the patient behind the scrotum. The most remarkable piece of ingenuity some of you will remember as occurring a few months ago, where, after a sailor had endured for over three days the agonies of retention, an endeavour had been made to introduce through the urethra a piece of lead gas-piping, which had been devised, *in extremis*, for the purpose by the engineer of the ship. Unfortunately, however, this failed to effect the purpose. When I saw him on his arrival here, on the fourth day of retention, I found the urethra much lacerated, and it was with considerable difficulty that I introduced a catheter, and removed a large quantity of the most fetid urine imaginable. Relief, however, came too late, the man dying shortly after his admission with convulsions and uræmic poisoning.

Though deploring that persons should be placed by circumstances in such unfortunate positions, I mention these cases for the purpose of showing you that your field for observation in this department of surgery is by no means restricted to routine, or even to the freaks of nature or disease. In undertaking to say anything about the treatment of stricture, I am conscious that the subject is a well-worn one. Still, with all our plans of treatment, we have not arrived at anything like uniformity of practice, and as this is only to be obtained by taking the sum of our respective experiences, I feel less hesitation in bringing under your notice some conclusions which my own experience, chiefly gathered in the wards of this hospital, has enabled me to arrive at. These considerations I hope to place before you during my course of clinical lectures this session. In using the term "stricture," I reserve it, as Sir Henry Thompson suggests in his eminently practical work on Diseases of the Urinary Organs, for one kind of stricture—viz., organic stricture. "Spasm" and "inflammation" are conditions more or less transient, but do not constitute stricture in the acceptation of the term which is now generally adopted. The causes of stricture are various. Let me give a few illustrations. A patient has a venereal sore on his glans penis involving the meatus. When this heals a cicatrix is left. Cicatrices are more or less disposed to contract, and in this instance result in the narrowing of the urethral orifice. This condition was well illustrated by a case in No. 7 ward, where the same state of things was produced by an improperly performed operation for circumcision; a portion of the glans penis having been removed along with the prepuce. When the sore healed, the cicatrix contracted, and the patient presented himself here with a tight stricture of the meatus requiring division. Another cause of stricture amongst our sailor patients arises from injuries where the urethra becomes bruised or lacerated. A man falls from aloft across a spar or a rope, and ruptures his urethra. If the patient recovers from the immediate effects of the injury, it is with his urethra scarred. Here we have the worst variety of stricture—traumatic—a form of the disorder more obstinate to deal with than any other. In our inquiries as to the cause of stricture, we find that by far the larger proportion of our patients attribute their misfortune, directly or indirectly, to previous attacks of gonorrhœa. Those who do so *directly* are disposed to look upon the stricture as the natural consequence of their previous mishap. Those who do so *indirectly* usually have something to say about the treatment employed and its bearing upon the subsequent formation of a stricture. It is worth our while for a moment to analyse the statements made by this latter class with the view of ascertaining how far their allegations hold good. "I was almost cured of my gonorrhœa, only a very slight discharge remaining, which I thought would go away of itself," is the statement of the patient who is convicted of his own indiscretion in having allowed

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things to go on from bad to worse. Others, again, seek refuge in referring their misfortune to the improper advice they have received. "I was told that it was only a gleet, due to weakness, which would go away by iron, tonics, and cold baths." Here we have illustrations of gleet terminating in stricture.

Now it is well for you, once for all, to understand that a gleet is not a disorder which is disposed to go away of itself; on the contrary, it requires careful and well considered treatment, and if it does not receive this—that is to say, if it is clumsily dealt with or not dealt with at all—it most probably ends in the formation of a stricture.

A gleet is to be regarded as indicative of the early formation of stricture. Nay, further, you will not do wrongly in regarding a gleet as the stage in the stricture-forming process when by your treatment you can promise your patient to restore his urethra to its normal condition; when a stricture is once allowed to become cicatricial in its character, you may palliate or adapt, but you can no more *restore* his urethra than you can by dissection or any other process remove a scar from his skin. You may moderate the inconveniences of a scar, but you cannot obliterate it. Let not, then, the curable stage of stricture pass by; at all events, let the onus of doing so rest with your patient, and not with yourself.

Again, it is very common to hear patients attribute their strictures to the use of injections in the treatment of their gonorrhœas. A considerable amount of prejudice exists in the public mind in reference to the use of these applications. Patients not unfrequently say, when consulting you about a gonorrhœa, "Do not order me an injection, as I understand they often occasion stricture." Is there any truth in such an allegation? Assuredly not, presuming, of course, injections are judiciously prescribed and properly used.

Let me remind you that the cure of gonorrhœa by specifics is essentially one on the principle of injection. For how do the drugs that act specifically on the urethra effect their purpose? How do we explain the action of copaiba, oil of sandal-wood, creasote, and certain terebinthinates, in the cure of gonorrhœa? Do not all these drugs exercise their therapeutic properties, by certain of their constituents, for the most part demonstrable, being conveyed by the urine to the situation of the disorder? What is this but a cure by injection, or, to be etymologically correct, ejection? It is the urine of the patient that conveys the specific to the disease, just as the rose-water in your injection does the sulphate of zinc, or other astringents.

It is the abuse of injecting that is open to animadversion. Injections in the treatment of gonorrhœa only do harm when, by reason of their composition or strength, they act as *irritants* to the mucous membrane.

In the ordering of urethral injections there are two rules which should be regarded:—1. Do not strain the urethra by the *quantity* of injection used. 2. Do not pain the urethra by the *quality* of the injection. A teaspoonful of fluid *put* into the urethra frequently is better than a tablespoonful *forced* in three times a day. This is a point upon which I have long insisted. In prescribing injections you should feel your way, adding to the strength according to circumstances. Some persons, it is well known, are far more sensitive to the action of remedies than others; and this applies equally to the urethra—"The temper of the urethra varies as much as the temper of the mind."* An injection appropriate in strength to a first gonorrhœa is like the proverbial drop of rain on the duck's back in the case of the *habitué*. I remember ordering one of the latter an injection well known as "the four sulphates." It cured him effectually, and without pain. A friend, hearing of the success, borrowed the prescription, and, without proper advice, used it. The consequences were, an acute attack of cystitis and a subsequent stricture. Surely it is only to the foolhardiness of the sufferer that such an unfortunate result is to be attributed.

And I would here remark that I have seen a great deal of damage done and suffering occasioned by the use of some of the nostrum injections advertised throughout the country as "infallible cures" and "preventives." Many of them contain the ordinary astringents applicable to the urethra, but in a very potent form. I caution you therefore against sanctioning their use.

* Brodie on Diseases of the Urinary Organs, p. 50.

These observations have been made with the view of showing that it is only by their improper use that injections are open to the charge of occasioning stricture. If they are prescribed in accordance with the rules I have given, you will never have cause to regret their use.

[Mr. Harrison then proceeded to speak of the pathology of stricture, illustrating his remarks by cases which have recently been under treatment in the infirmary.]

THE FERMENTATION OF URINE AND THE GERM THEORY.

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CAN bacteria or their germs live in liquor potassæ (Pharm. Brit.) when it is raised to the boiling-point (212° F.)? Such is now the simple issue to which certain great controversies have been reduced. If bacteria germs cannot resist such an exposure, then, by M. Pasteur's own implicit admission, his exclusive germ theory of fermentation must be considered to be overthrown by the broader physico-chemical theory. The truth or not of M. Pasteur's germ theory is the central question in dispute; but standing on either side, or in close juxta-position, are two dependent subjects of controversy whose importance for biological science and for medicine is even greater.

The question whether living matter can or cannot originate *de novo*, for example, depends upon the answer which is to be given to the question whether bacteria and their germs are or are not killed in boiling liquor potassæ. This also is practically admitted by M. Pasteur in his comments (*Compt. Rend.*, July 17th) upon my recent experimental evidence.

The other subordinate problem, the solution of which depends upon the same issue, is the truth or falsity of an exclusive germ theory in explanation of the origin and spread of the communicable diseases. If the germ theory of fermentation can be proved to be untrue, and if living ferments can be proved to originate spontaneously, we should soon cease to hear much about an exclusive germ theory of disease. This derivative doctrine would not long survive the death of its parents.

Thus M. Pasteur's theory of fermentation, the popular doctrine *omne virum ex vivo*, and the germ theory of disease, must all be simultaneously overthrown if it cannot be proved by M. Pasteur or some of his followers that bacteria germs are not killed when they are immersed in strong liquor potassæ raised to 212° F. (100° C.) How matters have been brought to this desperate predicament may be explained in a very few words.

Since the year 1862 M. Pasteur has defended four main positions, on the strength of which he has based his germ theory of fermentation, his repudiation of "spontaneous generation," and his support to the germ theory of disease. In the year 1870 and subsequently I have many times submitted these four positions to an independent criticism by means of experiment, and the result has been a confirmation of two of them and a rejection of the remaining two—the rejection being necessitated rather on account of facts obtained by new methods than from any implied defect in the particular range of experiments from which so distinguished an investigator as M. Pasteur deduced his opinions. Our respective views on these four points may be thus tabulated:—

PASTEUR.	BASTIAN.
1. That *some* boiled organic infusions having a neutral or slightly alkaline reaction will not remain pure even when protected from contamination. They will, on the contrary, ferment and swarm with bacteria.	1. Ditto.
2. That all bacteria and their germs are *not* killed in	2. That all bacteria and their germs *are* killed in such

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such neutral or slightly alkaline fluids raised to 212° F. (100° C.)

3. That *all* boiled organic infusions having an acid reaction will, when protected from contamination, invariably remain pure.

4. That all bacteria and their germs are killed in such boiled acid fluids.

neutral or slightly alkaline fluids raised to 212° F. (100° C.)

3. That *some* boiled organic infusions having an acid reaction will, when protected from contamination, ferment and swarm with bacteria.

4. Ditto.

Omitting for the present all intermediate stages of the controversy which has now been carried on for several years between one or other of M. Pasteur's followers and myself, I will proceed to show how the questions between us have been affected by my latest researches.

The results obtained in these researches have been embodied in a memoir communicated to the Royal Society on June 15th, of which an abstract was published in *Nature* on July 6th. A very short "Note" on the subject of these researches was also submitted to the Académie des Sciences on July 10th, and subsequently published in the number of the *Comptes Rendus* bearing that date. M. Pasteur replied to this note at the next meeting of the Academy (*Compt. Rend.*, July 17th), at a time when he would appear not to have seen the fuller abstract of my researches published in *Nature*. This will account for an error into which he seems to have fallen in regard to one of the most important conditions prescribed for some of my experiments, to which I shall have occasion presently to refer.

As regards the frequent fertility of boiled organic fluids having a neutral or faintly alkaline reaction (No. 1), it will be seen that M. Pasteur and myself are thoroughly agreed, notwithstanding Professor Tyndall's representations to the contrary made in the columns of this journal in the early part of this year. M. Pasteur now says (*Comptes Rendus*, July 17th, p. 178): "Je m'empresse de déclarer que les expériences de M. le Dr. Bastian sont, en effet, très exactes; elles donnent, *le plus souvent*, les résultats qu'il indique..... Il n'y a donc, entre M. Bastian et moi, qu'une différence dans l'interprétation d'expériences qui nous sont maintenant communes." The difference of interpretation to which M. Pasteur alludes depends upon our difference of view in regard to position No. 2. It was specially with the hope of dissipating any doubt remaining upon this part of the question that one section of my new experiments was undertaken. I determined to submit M. Pasteur's interpretation to the test of direct experiments, conducted in a way likely to yield decisive results. This is the point principally referred to in my "Note" to the Academy, and upon which M. Pasteur dwells in the above-mentioned communication.

If the fertility of the boiled neutralised fluids or infusions were really due to the survival of germs, as M. Pasteur supposes, then the boiling of the fluid in its acid state (when its germs would by admission be destroyed), and the subsequent addition to it of a sufficient amount of boiled liquor potassæ, without extraneous contamination, should be attended by negative results—that is, the fluid should remain pure, according to M. Pasteur, if it were really germless. But numerous experiments performed in this manner have shown me that sterilised urine to which boiled liquor potassæ in proper quantity is added will ferment and swarm with bacteria in a few days, and all the more quickly if the experimental vessels and their fluids are maintained at the temperature of 122° F. (50° C.)

M. Pasteur, whilst admitting the facts, says that this addition of boiled liquor potassæ to sterilised urine causes the mixture to ferment, because such added liquor potassæ contains germs which were not killed when this fluid was raised to 212° F. (100° C.) This, truly, is an astounding hypothesis. It is an hypothesis, however, which had been already anticipated and rejected, as anyone may see by referring to the concluding portion of my abstract, as published in *Nature*.

The answer, though simple, is twofold.

First: If boiled liquor potassæ were a germ-containing medium, then one or two drops of it (as of other germ-containing media) would always be capable of contaminating many ounces or even a gallon or more of sterilised acid urine. This, however, is never the case. The boiled liquor potassæ is only capable of initiating fermentative changes and of leading to the appearance of bacteria when it is added in quantities strictly regulated by the quantity and degree of acidity of the specimens of urine with which the experiment is being made. *Second:* A very slight excess of liquor potassæ over and above the quantity needed for exact neutralisation almost always yields negative results. This is also quite irreconcilable with M. Pasteur's view, that the liquor potassæ acts as a fertilising agent in my experiments by reason of its containing certain germs which have survived a heat of 212° F.

A procedure of this latter kind (namely, the addition of an excess of liquor potassæ), unwittingly adopted by M. Pasteur, because he was not forewarned, was in all probability the reason of his obtaining negative results when he operated with solid potash raised to 110° C. or higher. M. Pasteur says (*loc. cit.*, p. 179), the potash was dropped into the urine in quantity sufficient to render it "alkaline." The negative results obtained in these trials he attributed to the fact that the potash had been heated to 230° F. (110° C.), whilst I feel certain that they were rather due to the addition of an excess of potash, seeing that the addition, as he himself says, rendered the fluid "alkaline."

Briefly, then, M. Pasteur admits me to be correct in stating that boiled liquor potassæ in proper quantity will fertilise sterilised urine, and I prove that his interpretation of this fact is wrong by referring him to the totally different effects which result from the addition of one or two drops, or of a slight excess of boiled liquor potassæ. The negative effects in these cases are wholly irreconcilable with the notion that living germs are capable of surviving after they have been boiled in strong liquor potassæ; and if this is the case, M. Pasteur's position No. 2 is discredited, and my experiments with neutralised urine suffice to upset his exclusive germ theory of fermentation and to establish the fact of the *de novo* origin of bacteria.

But this same end may also be achieved in another independent way.

Another of the most notable results of my recent work is this. I have ascertained that a moderately acid urine will, after it has been boiled, remain pure when kept (free from contamination) at a temperature of 77°—86° F. (25°—30° C.), though the same specimen of "sterilised" urine will ferment and swarm with bacteria in less than three days if it is maintained at the higher temperature of 122° F. (50° C.) Many acid vegetal infusions will behave in precisely the same manner. But M. Pasteur still declares that bacteria and their germs are killed in acid fluids raised to 212° F. (100° C.) His words are (*Compt. Rend.*, July 17th, p. 179): "*J'ai prouvé directement qu'ils périssent dans un milieu acide à 100 degrés.*"

Here, then, is a ready means by which any careful experimenter may ascertain whether M. Pasteur is not wrong in maintaining his proposition No. 3. And if this is the case, if the germless fluid can (without extraneous contamination) ferment and swarm with bacteria, there is nothing for M. Pasteur to do but renounce his exclusive germ theory of fermentation, and to adopt the belief that bacteria may arise *de novo*.

Queen Anne-street, W.

CASE OF COLOTOMY.

BY HARRY A. DE LAUTOUR, M.R.C.S. ENG.

THE following case of colotomy (Amussat's operation), performed on account of cancer of the rectum, has been under my care.

D. K——, aged thirty-seven, a storekeeper at the Maerswhemia gold diggings, had been fourteen years in the colonies as a shepherd and miner. He had always enjoyed good health until the last two years. Father and mother both alive and in good health. An aunt died of cancer. Two years ago the patient was taken ill with an attack said to be dysentery. Was under treatment, and improved for a short time. Since then he had been gradually getting worse. He complained of great pain in the lower part of the back and abdomen, had excruciating pain on passing motions, which had become very small and hard, like pipe-stems. He passed also a quantity of offensive slimy dis-

COPY AVAILABLE

charge. Had lost flesh lately. The pain was worse at night, and he had been in the habit of injecting large quantities of laudanum per rectum. Lately he had been in great terror of having his bowels opened, and retained his fæces until pain induced him to take castor oil. This he did about three times a fortnight.

On examination he appeared to be considerably older than his stated age, was thin, and had the peculiar cachexia accompanying cancerous cases. The abdomen was thin and flattened, and the descending and transverse colon could be felt filled with hardened fæces. Digital examination per rectum caused great pain, not at the anus, but about two inches higher up, where the finger came in contact with hard masses of cancerous growths; the discharge was extremely offensive. No opening could be detected through the cancer, but, owing to the pain, no further examination was made. He implored me to do something to relieve him from the great agony he suffered when passing his motions, and even suggested that an opening should be made in his side, and placed his hand over the left ilium. He assured me no one had ever suggested this to him before, and I was very much struck at this strange appeal of Nature asking for relief and pointing herself to the most appropriate spot for such relief. I told him that such an opening could be made; pointed out the risks of the operation and the disagreeable consequences, and added that I did not feel justified at present in operating upon him.

On Dec. 28th I received a letter from him, requesting me to come up and operate upon him, as he feared that his bowels were totally obstructed. On arrival at the diggings, some forty miles away, next day, I found him strong enough to walk about. He had passed nothing for six days, and was afraid to take castor oil. Finding him strong enough to travel, I persuaded him to come down to town, which he accordingly did on the 31st. He was in great pain, and had not passed any motions; the transverse and descending colon were filled with hardened fæces. Countenance anxious; no hiccough; no tympanites. Pulse 74.

With the assistance of Mr. A. A. Fleming, of Oamaru, who administered chloroform, and Mr. C. E. Smith, of Otepopo, I proceeded to perform colotomy on January 2nd, 1876. A transverse incision was made from the outer border of the erector spinæ, about five inches long, parallel to the crest of the ilium, and about one inch from that bone. The skin, superficial fascia, and abdominal muscles were carefully divided until the transversalis fascia was arrived at; the dissection was then continued until a few fibres of the quadratus lumborum were seen in the centre of the wound. The deep layers of the fascia were then carefully divided for about an inch and a half, and a quantity of fat enclosed in fascia was then exposed. This rose and fell with the breathing. It was suggested that the small intestine had been exposed. On examination with the finger, the colon could be felt containing hard fæces and lying more behind the quadratus lumborum. The dissection was continued, and on dividing the fascia it was found that, instead of small intestine, it was merely the fat surrounding the colon. This was then exposed, and a nævus needle, armed with a strong waxed silk thread, passed through it; it was then drawn up to the surface, and stitched to the upper and lower margins of the wound. The gut was then opened freely. There was no escape of fæces or of fæculent matter. Hard scybala could be felt with the finger both in the descending and transverse colon. The cut margins of the colon were stitched to the edges of the wound with six catgut sutures, the wound sponged with a solution of chloride of zinc, and then brought together with deep and superficial sutures, and dressed with dry lint and cotton-wool. A morphia suppository, one-third of a grain, had been previously inserted into the wounded gut. Five hours later he was suffering slightly from shock; skin hot and dry; abdomen painful and tympanitic. Bandages were loosened; two drachms of laudanum injected per rectum, and hot fomentations with laudanum applied to the abdomen.

Jan. 3rd.—Doing well. Skin moist and cool; abdomen flaccid; pulse 84. Feels much relieved. Had previously suffered from flatus, which, by pressure on the rectum, had caused much pain. He finds now that this escapes through the wound. He has not passed any motions. During the day he has taken six drachms of laudanum per rectum; the pupils are not contracted, and are sensitive to light. Ordered two drachms of tincture of opium every four hours as an injection.

4th.—Continuing well. The wound on each side of the gut appears to be uniting by first intention. Has passed no motions as yet. There are no signs of peritonitis.

6th.—The silk ligatures attaching the gut to the margins of the wound, and also the sutures of the wound, were removed; everything looking healthy.

8th.—The wound at the ends have united perfectly; the gut is also adherent to the edges of the wound, but that part of the wound adjoining the gut has burst open, and does not look healthy. Poultices applied instead of the dry lint. Has not passed any motions as yet, neither per rectum nor through the artificial anus. The colon above and below the wound can be felt filled with hardened fæces, and they can also be felt with the finger introduced through the artificial anus. He feels in capital health, and takes food more freely than he has done for some weeks past. To-day he got up and walked about his room with ease and comfort.

10th.—No motions have as yet come away. It appeared to me that the fæces below the wound compressed the gut above the wound, and acted as a mechanical obstruction, and that if I could get the contents of the colon below the wound away the contents above would naturally come through the artificial anus. I therefore ordered an enema of castor oil per rectum and one drachm of tincture of opium by the mouth, with a view of lulling the pain during the passage of the fæces.

11th.—Has passed a quantity of fæces per rectum, and shortly afterwards several hardened lumps of fæces, said to be the size of a hen's egg, came through the artificial anus. Ordered a tablespoonful of confection of senna by the mouth.

12th.—A large quantity of soft and pasty fæces has come away through the artificial anus during the last twelve hours. The wound is looking healthy, and is now dressed with an astringent lotion. He gets up every day for a few hours, and feels in good health and spirits. The catgut sutures were removed to-day, and appear to be in the same condition as when inserted—that is, they do not appear to have been absorbed to any appreciable extent. They have not caused any irritattion or suppuration, and have proved very valuable in keeping the gut in its place until firm adhesion has taken place.

17th.—Improving in every respect; passes motions regularly through the artificial anus. As he does not suffer as much pain as formerly, he takes less opium. His appetite is good; he takes out-door exercise, and looks forward to returning home in the course of two or three days.

I have ventured to send this case for publication in THE LANCET; for although colotomy has of late years been not infrequently performed, yet, seeing how slight the after-consequences of this operation, as proved by Amussat, may be, and seeing also the beneficial results and relief afforded to the poor sufferers, for a short time only though it may be, colotomy seems to obtain hardly so much favour as it deserves.

There are two or three points of interest in this case. First, that no motions were passed for nineteen days, from December 23rd until January 11th, and that, too, without vomiting or any other alarming symptoms. Naturally the intestine would suffer from shock, which would tend to paralyse its action for a time. Secondly, that the fact of the patient being in the habit of taking enormous doses of opium—an ounce of laudanum in twenty-four hours, as he had frequently done—had no bad effects on the result of the operation; possibly it may have had a tendency to lessen the chances of peritonitis. Thirdly, that the fat enclosing the colon rises and falls with expiration and inspiration, which is said by some to be peculiar to the small intestine. Fourthly, the great assistance rendered by the catgut sutures, which were taken from an old fishing-cast, and were not carbolised, and that they were not absorbed, though I do not deny that eventually they might have been. Fifthly, that the contents of the lower colon caused obstruction to the passage of the fæces contained in the gut above the artificial anus, and that by their removal a free exit was at once given, and that then the intestines performed their functions in a natural manner.

Otago, New Zealand.

THE RASH OF ENTERIC FEVER.

BY WYNDHAM COTTLE, M.A. OXON., F.R.C.S. ENG.,
SENIOR ASSISTANT-SURGEON TO THE HOSPITAL FOR DISEASES OF THE SKIN, BLACKFRIARS.

THERE are some circumstances in the following case, which I was asked to see, that seem to me worthy of record.

The patient was a well-developed man aged twenty. The history of the case showed that when he came under observation on June 6th he complained of malaise, loss of appetite, nausea, headache and drowsiness, with a furred tongue, pulse 112, temperature 101°—indeed, with all the symptoms of commencing fever. Except that these symptoms increased in intensity, he remained in much the same condition till June 10th, when I saw him. I found that his skin presented the following appearance:—The face, the whole trunk, the arms and thighs, were thickly covered with rose-coloured blotches, in parts of a darker hue, slightly raised above the level of the surrounding skin, distinctly circumscribed, and mostly circular or ovoid, and separated from each other by unaffected skin, and varying in size from the eighth of an inch to an inch in diameter, the surfaces of the blotches being smooth. They were neither accompanied by irritation nor followed by desquamation. These appearances were indistinct on the face, and absent on the scalp, inside the mouth, and below the knees. This rash in appearance was almost identical with that of a well-marked case of measles, and perfectly unlike urticaria in its colour, uniformity, course, and characters.

On the following day, June 11th, the above-described blotches had greatly faded, leaving only a discolouration of the skin in the places they had occupied, which had almost disappeared on the following day (June 12th), when the characteristic rash of enteric fever showed itself on the abdomen, accompanied by the diarrhœa, &c., which marks that disease, the temperature rising to 105·2°, and running the usual course of that fever, and terminating in recovery.

In this case there were none of the constitutional symptoms of measles—no coryza, sore-throat, nor any history that made the presence of that exanthem probable; nor did the eruption I have described appear on the day the rash of measles is wont to show itself, but somewhat later; nor were its course, duration, and termination similar.

I would submit that it was merely an exaggeration of the dermic injection that is not unusual in the early stages of enteric fever; and is not the inference warrantable, that many of the cases of scarlatina, or of measles in conjunction with enteric fever, of which one hears so much and so often, may be explained by supposing that such a blush, or, in the more marked cases, well-defined eruption, is mistaken for the rashes which characterise those diseases? In enteric fever, it should be borne in mind, a scarlet tint of varying intensity, and presenting much the same appearances as are produced by the application of hot water to the skin, is not a rare occurrence; and, in the absence of other diagnostic symptoms, it can be distinguished from the rash of scarlet fever, which it closely resembles, by noticing that it shows itself on the day, or day but one, immediately preceding the ordinary typhoid eruption, and later in the disease than the rash of scarlatina would have appeared, and also by the absence of consecutive desquamation.

Saville-row, W.

CASE OF A FOREIGN BODY IN THE URETHRA.

REMOVAL BY MEANS OF A WARM BATH.

BY STAFF-SURGEON WILLIAM ANDERSON, R.N.,
MELVILLE HOSPITAL, CHATHAM.

(*Communicated by the* DIRECTOR-GENERAL OF THE MEDICAL DEPARTMENT OF THE NAVY.)

J. S——, aged thirty-six, a private in the Royal Marines, presented himself at this hospital on July 27th at 6 P.M., looking pale and somewhat alarmed. On questioning him, the following facts were elicited.

Some months ago he imagined that his stream of urine was smaller than it should be, and began to use a bougie, simply, as he states, because he heard that others he knew had done the same; and, on the score of economy, he manufactured one for himself of gutta-percha, and had been in the habit of passing it two or three times a week. On the day he presented himself, shortly before noon, he passed this home-made instrument as usual, and states that while it was well into the urethra he gave it a turn, and, on withdrawing it, he found that a portion had broken off, and was left in the passage. He was at his own home when this occurred, and he at once went to a civil practitioner, who, he says, passed an instrument, and told him that he felt the obstruction, and advised him to come here, which he did, but not immediately.

After hearing the above account of the case from the man, I placed him on a sofa in the receiving-room, and carefully examined along the course of the urethra externally, passing the finger into the rectum, and afterwards passed a No. 6 gum-elastic catheter into the urethra very slowly and carefully as far as the membranous portion, but failed to detect any foreign substance. On withdrawing the catheter the patient passed about a pint of urine in a moderately good stream, after which he expressed himself quite comfortable and free from pain or uneasiness, and, as if to convince me of the fact, he rubbed his hand along the perineum and under part of the penis. After this, and especially as I could detect no obstruction, I concluded that the broken portion of the bougie had passed into the bladder, and, "much against his will," decided to admit him into hospital for observation and treatment. He was thereupon ordered to have the usual warm bath and to be put to bed in one of the surgical wards. After he had been in the bath about ten minutes, he began to explore with his hand at the posterior part of the perineum, and there felt the portion of the bougie, and gradually and easily with his finger pressed it forward along the urethra until he got it to the external orifice, when he, "to his great delight," extracted it himself.

The question naturally arises, Where was the piece of bougie hidden when carefully examined for both externally and internally? Was it in the bulb of the urethra, or firmly fixed in the prostatic portion? Most probably the latter, for if in the former, the examination could scarcely have failed to detect it; and it is very probable that his successful effort at micturition after the withdrawal of the catheter may have forced it forward into a wider part of the urethra, where he afterwards felt it while in the warm bath. The piece of gutta-percha removed was two inches in length, and of the size of a No. 7 bougie.

My only object in publishing this case is as a hint to others who may have a similar one to deal with, and to show the happy effect of the warm bath in a case of this kind, whereby the patient may be saved from the effects of a troublesome and perhaps serious operation.

REMOVAL OF 121 OUNCES OF PUS FROM THE LEFT PLEURA OF A CHILD AGED THREE YEARS;

WITH SATISFACTORY RESULTS.

BY J. DE BURGH GRIFFITH, M.B.

EARLY in March last I was called to see a little boy three years of age, who had been ill for some time. I found the child extremely emaciated, and presenting a haggard, aged, and worn-out appearance. I observed that the abdomen was greatly enlarged, and also that the heart was beating under the right nipple; the breathing was also laboured and hurried. Percussion of the left side gave dull sounds from apex to base in front and behind, and bulging of intercostal spaces. The diagnosis was not very difficult. I suggested to the parents the removal of the fluid as the last though but slender chance of saving his life, and to this procedure his parents readily assented. Accordingly my late principal and myself undertook the operation, and with a Dieulafoy's aspirator removed thirty ounces of healthy pus; but, as the child began to show symptoms

of sinking, we were compelled to suspend the operation before the cavity was quite empty. The heart travelled across the chest from the right side almost to its normal position. The little patient was put to bed, had a long and refreshing sleep, and awoke in the morning with a great desire for food.

The child continued to improve from day to day, sleeping and eating well, and having no cough. However, in about a week, he began to show signs of declining. The heart was again in the right side, or, rather, the wrong side, and his breathing was distressed. On April 2nd we again tapped his chest, and this time removed 40 oz., completely removing all pus, which was still quite healthy, and about the consistency of thick cream. The respiratory sounds over the affected side were fairly pronounced. Although somewhat harsh and tubular, the chest upon percussion was very resonant, doubtless from the absence of the lung from the parietes of the chest, the lung in all probability not having expanded after the long-continued pressure against the spine and mediastinum.

After this second operation the patient improved very rapidly, putting on flesh, and sleeping well. He took cod-liver oil and quinine, which seemed to agree with him very well.

On April 8th we thought it advisable to tap the chest again, and on this occasion took off 20½ oz. also of healthy pus. He still continued to improve, although after about ten days he seemed to decline and refuse food, was restless at night, and had some cough. The affected side was again quite dull, and the heart was displaced.

On April 21st we performed paracentesis for the fourth time, and on this occasion only got away 2½ oz., which was mixed with a blood-stained frothy matter; and, as the fluid suddenly stopped flowing into the cylinder, I should say the lung was expanded, and had probably been struck by the point of the needle, and this opinion was almost confirmed by auscultation, which showed that the lung had greatly expanded; the respiratory sounds were more vesicular. However, no bad consequences followed this operation, and the child went on in every respect very well till May 10th, when the operation was again undertaken, and 28 oz. evacuated with complete success; and the little boy is now (May 25th) so well that he can walk about by himself, and seems quite to enjoy life again.

We propose employing the drainage-tube whereby the fluid as secreted may drain away, and give a better chance for the lung to become adherent to the side.

Wotton-under-Edge.

REPORT OF A CASE OF PLACENTA PRÆVIA; RECOVERY.

By F. H. ALDERSON, L.M.

On June 19th I was sent for to attend Mrs. G—— in her twelfth labour. On my arrival I found her in bed, but with few and feeble pains, and just reviving from an attack of flooding. I examined her. The os was high up, and not open or dilatable. As examination, however, brought on bleeding, I did not continue it, but requested my patient to keep in bed, take everything cold, and ordered her twenty minims of solution of ergot and ten minims of tincture of opium every three or four hours.

On inquiry I found Mrs. G—— was seven months pregnant. Bleeding first came on the previous Thursday, after lifting a sack of potatoes (she was the wife of a greengrocer). She had very few pains, and those but slight, and as the bleeding had stopped, I did not think it necessary then to remain, and left, thinking from the history probably it was a case of accidental hæmorrhage, for there was the bleeding following a distinct and sufficient cause, which is not generally the case in placenta prævia; and although the flooding came on without pain, the pains did not increase the hæmorrhage, or if they did, they were so slight and the bleeding so little increased, as to escape her notice. But before leaving I cautioned her to have some ice in the house, in case of a recurrence of the flooding, and should it recur, to send for me at once.

The next morning Mrs. G—— sent word I need not trouble to call again until I was sent for, as she was much better; the medicine had eased her very much, as well as stopped the bleeding. However, I was summoned somewhat hastily on the following Saturday, June 24th, and requested to go at once to Mrs. G——, "as she was bleeding fast." On my arrival I found my patient had just lost a quantity of blood in gushes, and said "she felt five minutes before as if she should have died before I could get to her." On examining per vaginam, I found the os dilated to the size of a florin, and dilatable, and could feel the placenta, which was centrally attached, directly over the os. I removed pieces of placenta situated immediately over the os, and the bleeding at once ceased. At this stage matters appeared from the vaginal digital examination much as I have found them when I have been called to an early abortion, when the fœtus and placenta have been expelled before my arrival, but leaving a small portion of the placenta behind, which, upon my removing, the bleeding ceased; so much was this the case that I almost instinctively asked the patient if she was sure she was seven months, and if she did not think it possible she might have passed the fœtus and placenta in the bedclothes or elsewhere. She said she had not passed anything that she knew of. I then examined the abdomen, and found the uterus about the size that would correspond to a six or seven months' fœtus. I gave another dose of ergot, and waited for a pain; for there was no more hæmorrhage. At the next vaginal examination during a pain I could feel the placenta attached to the cervical zone, which I separated with my finger, and with another pain the placenta came away in my hand. I then found, almost beyond my reach (for the woman had a long vagina), a hand presenting, but no other part. I then decided to turn, and sought for the foot of the opposite side, getting one of the women present to support the uterus. I brought down the foot without much difficulty, although the membranes had ruptured two or three hours previously, and completed labour within an hour of my arrival.

Mrs. G—— made a capital recovery, without a bad symptom. At the expiration of a fortnight I found it was not necessary to continue my visits, and she told me, with the exception of feeling a little weaker, she felt quite as well as usual at so early a period after labour. I called on her again three weeks after labour, and found her down stairs, and quite well, but thought it right to caution her against assisting in the shop at present.

I have been induced to record this case on account of the rarity of complete placenta prævia. I have attended upwards of 1000 cases of labour during the last twelve years, and yet this was the first case of complete placenta prævia that has occurred in my practice. I have had three cases of partial placenta prævia, labour occurring at the fifth, seventh, and ninth month respectively, and in each case I ruptured the membranes, and the hæmorrhage ceased; but the child was still-born. Also because of its fatality, placenta prævia being perhaps generally considered the most alarming and anxious presentation you can have. But chiefly I have reported the case because the treatment adopted, the separation and removal of placenta, was so successful, and appeared that which was plainly indicated by nature, for there never was any hæmorrhage after I had removed that portion of placenta over the os uteri, and the entire placenta was very easily detached, and was expelled during a feeble pain with very little assistance on my part; indeed, had the head presented instead of the arm, I think labour might have been completed by nature, by the expulsion of the placenta first, and the child quickly following.

The removal of the after-birth in placenta prævia has been strongly advocated by the late Sir James Simpson, in his Obstetric Works, vol. i., p. 683, and I believe is undoubtedly the most successful practice as regards the recovery of the mother; and whatever treatment is adopted, the child is invariably dead. After Sir James Simpson practised the detachment and removal of placenta in placenta prævia he only lost one mother out of forty-four, whereas previously, under different treatment, he lost two out of three. A very important reason for removing the placenta in these cases is, in nineteen out of twenty cases flooding ceases when placenta is detached (Clay's Obstetric Surgery, p. 152). It is said the seventh month is an unfavourable time for the practice. I did not find it so, and the immediate arrest of anything approaching flooding, even after the removal of that portion of the placenta im-

mediately over the os, convinces me we need not limit this operation of separation and extraction to cases where the exhaustion of the mother is too great to admit of turning; for although turning had to be resorted to in the case I have reported, it would not have been necessary, I feel sure, had the presentation been normal. I think it worth adding, the administration of ergot evidently assisted the expulsion of the placenta, and yet did not render turning more difficult, although the membranes had been ruptured, as I have before mentioned, two or three hours previously.

Southerton House, Hammersmith.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

LEUCOCYTOSIS, WITH ELEVATION OF TEMPERATURE; DEEP-SEATED SUPPURATION; DISCHARGE OF PUS; RECOVERY.

(Under the care of Sir WILLIAM JENNER and Dr. REYNOLDS.)

Two weeks ago, in another part of this journal, we called attention to an interesting series of observations on the proportion of white to red blood-corpuscles in different diseases, lately described in a thesis by M. Henri Bonne. It was particularly noted that pus-formation had been found to be contemporaneous with an increase in the number of white corpuscles in the blood, and that the unnatural increase gradually diminished after the pus obtained free vent. Similar conditions have been observed, quite independently, in a case now under treatment at the above-named hospital, for the notes of which we are indebted to Mr. A. E. Broster, physician's assistant. One tempting fallacy presented itself in the case. The number of white corpuscles began to diminish soon after the internal administration of phosphorus was begun, not, we may judge, as the result of any special action at the time, but coincidently with the maturation of the abscess and the discharge of the pus.

A pale, weakly-looking lad, aged seventeen, was admitted on March 13th into Ward 8 with perityphlitis, from which he seemed in a short time to recover entirely. The extreme pallor of the face did not, however, disappear, and the temperature remained persistently above normal—about 100·3°. Although there was no apparent enlargement of the spleen or any other glands, the blood was examined microscopically on April 27th, and found to present the following appearances. The coloured corpuscles were yellowish-brown, did not run into rouleaux, but cohered at their edges, while after a few minutes their individual outline was lost altogether. As many as seventy-six white corpuscles were counted in a not overcrowded field. The patient continued to lose flesh, and the pallor and high temperature continued. On May 5th no less than 130 white corpuscles were seen in the field, and the diagnosis of leucocythæmia was made by Sir William Jenner. Phosphorus, in one-thirteenth of a grain doses three times a day, was given. When the blood was examined again, on May 14th, the same excess was observable, but on the 22nd not more than fifty white corpuscles were seen in the field. A few days later the boy complained of uneasiness in the right lumbar region, but as nothing could be seen beyond lateral curvature of the spine, no further notice was taken of it at the time; but on June 4th a large abscess was recognised in this region, and was aspirated. On examining the blood on the 14th of June, only twenty-eight white corpuscles were seen. The abscess was subsequently freely opened on the 21st, and a drainage-tube inserted. From this time the boy gained flesh and strength and improved in appearance, though the temperature remained above normal. A month later, during which the abscess continued to discharge, the blood was again examined, the number of white corpuscles being but slightly in excess of their normal proportion, but markedly less than when previously examined. There was, in addition, a large quantity of granular matter, evidently protoplasmic.

The general condition is now considerably better, although the temperature is still a little above normal. On the 8th inst. the abscess was still discharging profusely, the number of white corpuscles was in normal proportion, and the quantity of granular matter had greatly decreased. The patient continues to take phosphorus as well as cod-liver oil and iron.

LONDON HOSPITAL.

PARTIAL CONVULSIONS FROM BRAIN DISEASE; SYPHILIS; OLD DEPRESSED FRACTURE; TREPHINING.

(Under the care of Mr. MAUNDER.)

For the following interesting notes we are indebted to Mr. Herbert W. Page, F.R.C.S., lately surgical registrar.

The notes of this case illustrate the onset and progress of partial unilateral convulsions from localised brain disease, as bearing on the experiments of Hitzig and Ferrier, and the views of Dr. Hughlings Jackson. The discharging lesion (most probably syphilitic) was no doubt determined by the fracture of skull—an injury which had in itself originally given but little trouble.

John H——, labourer, aged thirty, admitted into the hospital on April 26th, 1875, had always had good health with the exception of syphilis, contracted some four years before admission, when he had a chancre called "dry," and followed by rash and sore-throat. About one year after the sore, while at work, a brick fell on the left side of his head, causing a "large lump," but no other inconvenience. Six months after this accident he received a blow with an iron bar at the same spot. He was but momentarily insensible, and continued at work, feeling as well as usual in two or three days. He remained well until August, 1874, when, on returning to work one day after dinner, he felt "drowsy, and was in a semi-unconscious state," followed shortly by a fit, in which, he was told, he had suddenly screamed, become black in the face, and fallen down unconscious. He had four more fits on the same day, and two three weeks afterwards. He remained free from these attacks until April 19th, 1875, and between that day and his admission to the hospital he had three others. He added that he had never felt quite the same man since the accident, and that for a few weeks after the first fits his sight was bad, and he was unable to read. He was sent to the hospital by Dr. Kelly, of Rotherhithe, under whose care he had hitherto been, and on admission his chief complaint was of "fits, and numbness and weakness of the right side and arm."

An irregularity of surface, about an inch in diameter, and apparent deficiency of the outer table of the skull, were found near the anterior margin of the left parietal bone, about an inch and a half from the anterior superior angle, and, by the aid of one of Turner's diagrams, inferred to be over the hindermost part of the middle frontal convolution.

To use his own words, "the fits begin with a tingling in my right hand and a drawing up of the arm and hand, and as soon as the arm is drawn right up I go off and can remember no more. I also have tingling in the right side of the body and the right cheek. I feel a sort of stupefied, and the bowels seem as if they wanted to be moved." There was some weakness of the right arm and slight impairment of sensation. He made no complaint of the right leg. Small doses of the solution of perchloride of mercury were given, and his condition generally improved; the arm felt stronger, and his mind was brighter. On May 18th he had a slight fit, which he described as beginning in the right little finger, but not reaching higher than the shoulder. He did not lose the power of speech, though in previous *slight* attacks, while conscious and able to hear and understand others, he had been himself unable to talk. The note of June 5th is that the patient had a sensation of "deadness," commencing in the right side of the head, proceeding down the right shoulder and arm, and thence to the right side

and leg. There was with this no twitching of muscles, but diminished power, lasting for half an hour, during which there was increased action of the heart. His temperature was normal and his urine natural while in the hospital, and on the day of his discharge (June 11th) he certainly felt better than when he came in.

He returned on June 22nd, evidently not so well; he was pale and anxious-looking, and markedly thinner, and the fits are now described and observed as commencing with spasmodic twitchings of the right angle of the mouth, deviation of the tongue to the right, and inability to speak, succeeded by numbness without twitching of the right thumb and adjoining three fingers, without loss of consciousness. Four such attacks were very transitory, and consisted merely of a "queer sensation in the head, as if the head were dead," lasting, with inability to speak and without unconsciousness, for five minutes. Numbness in parts spasmodically affected usually lasted for about two hours after a "discharge."

Thinking that some good might result therefrom, and with the advice and approval of Dr. Langdon Down, Mr. Maunder trephined at the centre of the depression on July 7th, and on elevating the segment of bone, found a small depressed spicule of the inner table embedded in dura mater. There was obviously some fibroid thickening round and about the exposed portion of dura mater. The wound gave no trouble; it healed gradually and kindly; and the temperature, never above 100·2° F., had fallen to, and remained, normal after the third day. He was comparatively free from fits or abnormal sensations until July 15th, when he had four "warnings"; a tingling sensation in the right little-finger, and similar attacks on this and the following day were stopped by rubbing the hand or tightly bandaging the arm. The patient expressed himself as being mentally clearer than before the operation—he certainly seemed so,—and said he enjoyed reading the newspapers, which before he had quite given up.

On July 23rd he had a fit, beginning in the right little and ring fingers, going up the arm to the side of the face, and thence down the right side to the leg; twitching of all these parts being noticed for fifteen minutes. Slight occasional seizures recurred up to the end of July. During August, he complained of pain in the head, with more marked loss of power, and impairment of sensation in the right hand and arm. He was moreover in very low spirits.

On August 17th a fit, seen by Mr. Mercier, is thus recorded:—"Patient attracted attention by a peculiar snorting noise, and when seen had a definite right-sided convulsion, affecting chiefly the face, and the hands in much less degree. The shocks were rapid and sudden, precisely like those of an ordinary epileptiform seizure. The mouth was most involved, the eyelids next, and the eyes apparently not at all. There was no loss of consciousness. He attempted to speak, and succeeded in saying 'water' once or twice in the course of the fit. Immediately after the fit he spat up a little florid blood, and the mouth on movement was drawn to the left, and the right eye closed less completely than the left. Five minutes after the fit, the facial paralysis was only slightly marked, and no difference could be detected in the grasp of the hands. A quarter of an hour after he complained of severe headache." During this day he had arrested several slight attacks by pressing his jaw upwards with his right hand.

On August 23rd he had a fit involving the right leg, after spasm of the face and arm; and on August 24th the optic discs were observed hazy at the margin, and the note is: "Query, commencing neuritis?"

On Sept. 7th he had another fit, face, arm, and leg being affected, and described by him as the "stiffest" since he came into the hospital. He complained more of his head, and of his sight getting weak; and on Sept. 10th, the day before he was taken from the hospital by his friends, ophthalmoscopic examination revealed "well-marked double optic neuritis."

On Jan. 1st, 1876, Dr. Kelly wrote that the "condition of the man had been one of physical and mental imbecility since he left the hospital; that he had been comparatively free from the epileptic fits, except spasmodic twitchings of the right upper extremities, and which alternated with the most distressing hiccough, the one regularly ceasing as soon as the other began." He died early in February, but, unfortunately, no post-mortem examination was allowed.

LEEDS GENERAL INFIRMARY.

CASES OF ACUTE RHEUMATISM TREATED BY SALICIN AND SALICYLIC ACID.

WE regret that we have been unable to publish earlier the following interesting records, which throw much light on the value of salicin and salicylic acid in the treatment of acute articular rheumatism, and for which we are indebted to Mr. E. H. Jacob, M.B., house-physician.

CASE 1. (Under the care of Dr. EDDISON.)—A. P——, aged nineteen, admitted March 15th. Had had pain in his joints since Jan. 3rd. On admission pain was not very severe. Temperature 99° F.; urine acid, 1027, containing albumen. He was treated with alkalies and a blister applied to the right knee. On the 25th the evening temperature rose to 102·6°; on the 28th to 102 8°. During the next five days the temperature gradually sank, but on April 1st, 2nd, and 3rd was 101°, and the pain was very severe. The patient continued on the same treatment, the temperature being on an average 100° for the next eleven days. On the 15th the evening temperature was 101°, pain very severe, especially in the intercostal muscles. The patient began to take ten grains of salicin every two hours, and for the next sixteen days took from thirty to sixty grains per day. The evening temperature, however, during this period for nine days rose to 100°, and for the next seven days, with one exception, ranged between 99° and 100°. On the 20th (six days after beginning to take the salicin) a pericardial rub was detected with an increase of cardiac dulness, accompanied with much pain in the precordial region. The friction sound remained till May 4th, when he began to convalesce, and he was discharged on May 12th, a systolic murmur being audible at the apex of the heart and a diastolic over the aorta.

CASE 2. (Under the care of Dr. CLIFFORD ALLBUTT.)—G. C——, aged twenty-eight, admitted April 5th. Had had general pain for the last five weeks, very severe five days; very restless, pale, and distressed. Temperature 102°. Systolic murmur heard at the apex of the heart. Pain in all the joints, and intercostal muscles on left side; face and trunk profusely perspiring. He was treated with alkalies, the pain being relieved by hypodermic injections of morphia. His temperature varied between 102° and 103° for four days, then gradually sank to 100°.—April 16th: Evening temperature 100·8°; pain continued very severe.—17th: Salicin was given in ten-grain doses every hour; evening temperature 101°.—18th: The same amount was given, except for four hours; evening temperature 99·6°.—19th: Salicin every two hours; temperature (evening) 99·4°; much less pain. The salicin was continued, ten grains every two hours, for a week, the temperature only once reaching 100°, and the pain decreasing. He remained in hospital for three weeks longer in a very anæmic state, with occasional pain and stiffness in his joints.

CASE 3. (Under the care of Dr. EDDISON.)—A. D——, aged seventeen, admitted April 13th, with painful swelling of both ankles, knees, and shoulders, and the right wrist. She had been laid up for a fortnight; temperature 100·1°. Mitral systolic murmur. She was given an alkaline mixture.—April 24th: Both shoulders and the right knee very painful. She was ordered fifteen grains of salicin every three hours. She improved greatly, and on the 28th was almost free from pain. The salicin was given every four hours till May 1st, when there was only some slight stiffness in the right shoulder, which was relieved by a blister.

CASE 4. (Under the care of Dr. HEATON.)—J. F——, aged thirty-two, admitted April 18th, in a fourth attack of acute rheumatism. He had been in severe pain for three days. Both knees were swollen and tender; shoulders very painful. Temperature in the evening 102°. Cardiac dulness increased, with a systolic murmur at the apex. Urine alkaline.—19th: Took sixty grains of salicin. Evening temperature 102 8°.—20th: Took sixty grains during the day. Feels much easier; tongue cleaner. Evening temperature 103·2°.—21st: The medicine seemed to cause diarrhœa, and was omitted. Evening temperature 102 8°.—22nd: Feels much better; joints looser. Evening temperature 101·6°.—On the 23rd and 24th he was not so well, the evening temperature rising to 102°, and both hands becoming affected. On the 25th, salicin in fifteen-grain doses every two hours was ordered; this was taken for three days without any apparent effect. The salicin was then taken every three

hours, and an alkaline mixture given thrice daily for five days; the evening temperature still varying between 100° and 102°. On May 4th the salicin was given every two hours. Evening temperature 99·8°. There was some pain in the knees and elbows. On the 7th the evening temperature was 98·6°, and the medicine was left off. The temperature rose, however, to 101·4° the next evening, but unaccompanied by pain. The patient remained in hospital for twenty days after this, the evening temperature for fourteen days varying between 99° and 100°. He complained of some stiffness in the joints, but was discharged cured on May 30th, after a stay in the hospital of six weeks.

CASE 5. (Under the care of Dr. HEATON.)—Admitted May 8th, having been laid up three weeks with pains in the joints. On admission, face was flushed, both ankles, knees, and left elbow tender and swollen. Evening temperature 101·6°. Heart-sounds normal. To take fifteen grains of salicin every two hours. Began the medicine on the evening of the 9th.—10th: Temperature in the morning 98·8°; in the evening 101·2°.—11th: Temperature in the morning 100·4°; in the evening 100°. Legs are better, but wrists and elbows painful.—12th: Feels better; wrists swollen. Evening temperature 100·4°.—13th: Much the same. Evening temperature 100·2°. The next day the temperature sank to 99·4°, and, except on one occasion, remained below 100° till his discharge on June 6th. The salicin was continued three times a day till May 27th, but the pain in the joints was not entirely removed till June 5th.

CASE 6. (Under the care of Dr. HEATON.)—E. M——, aged twenty, admitted May 12th. She had had a previous attack six years before, being laid up three months. A week before admission she was seized with rigor, sweating, and pains in the limbs. Both ankles, knees, and the right elbow and wrist swollen and painful; face flushed; skin dry; systolic murmur audible at apex. At 9 P.M. on May 14th began taking salicylic acid, fifteen grains every two hours; the evening temperature on 12th and 13th having been 101·8° and 101·6°, and on the 14th 101·8°.—May 15th: In the evening the pain had entirely gone, except some slight stiffness in the right hand. Evening temperature 101°. From this time the temperature gradually fell, and the evening temperature became normal on the 18th. The salicylic acid was discontinued on the 17th, having given rise to sickness, and an alkaline mixture was ordered. The patient remained in hospital for a fortnight longer in a very anæmic state, but with no return of rheumatic pain.

CASE 7. (Under the care of Dr. HEATON)—J. A. J——, aged twenty-two, admitted June 2nd. She had had a slight previous attack. She had a rigor ten days before, and had been laid up since. On admission the right shoulder and wrist, left knee and hip-joint were swollen and tender. Pulse 110; evening temperature 104°. Sweating profusely. A systolic murmur was audible at the apex. The next day the morning temperature was 100·8°. She began taking fifteen grains of salicylic acid every two hours. Evening temperature 102°. On the 3rd, evening temperature 100·2°. On the 4th, 99·6°. A little pain was felt in knees and thighs.—5th: Feels well. There is slight stiffness in the hips, but no pain. She sleeps well, and has no sickness, diarrhœa, or catarrhal symptoms. Salicylic acid to be taken every six hours. The next day the medicine made her sick, and was discontinued. She was discharged cured on the 9th, after a stay in hospital of eight days.

CASE 8. (Under the care of Dr. HEATON.)—H. T——, aged twenty-seven, admitted June 21st. Has had pain in knees and ankles ten days, gradually getting worse. On admission, both ankles, right shoulder, and elbow were painful and tender. Profuse perspiration; tongue coated. systolic murmur at apex. Evening temperature 100·6°. On the 23rd began to take fifteen grains of salicylic acid every two hours. In the evening he had had sixty grains. He was quite free from pain. Temperature 98°.—24th: Still sweating; bowels rather loose. Temperature, morning 99°, evening 98°; pulse 60. Still free from pain.—25th: Still sweating, but with no pain. Temperature 99·2°. To take the powders every six hours.—26th: Doing well. No pain. Temperature normal.

CASE 9. (Under the care of Dr. HEATON.)—J. M——, aged twenty-two, admitted June 22nd, with pain in joints of six days' duration. His knees, right ankle, and left wrist were swollen and tender, and his hips very painful; tonsils much swollen and inflamed, especially the left; heart's apex beats in normal position; there was a loud systolic murmur over apex and aortic valves. He was given Dover's powder, ten grains, but slept very little that night. Temperature 102°.—23rd: Ordered salicylic acid, fifteen grains, every two hours. In the evening he had taken sixty grains. All pain was gone except very slight pain in the hips and that in the throat. Evening temperature 102·2°.—24th: Left tonsil has discharged, and his throat feels much better; has slight pain in right knee only; had retention of urine for about fourteen hours. Evening temperature 100·6°.—25th: Feels well; has no pain. Evening temperature 99°.—26th: Doing well.

Remarks.—The above cases seem to show a great superiority in salicylic acid over the alkaloid in the treatment of rheumatism. In none of the cases treated with salicin did the drug affect the pain or the temperature as in those treated by the acid, while the fact that pericarditis ensued (in Case 1) while the patient was taking salicin would indicate its inability to arrest the disease. On the other hand, in the cases treated by salicylic acid the influence of the drug was most marked, the pain being considerably or entirely removed within twenty-four hours, while, except slight sickness in one case, no unpleasant symptoms followed its use. It is unfortunate that in nearly all the cases cardiac complication had taken place before the patients came under treatment.

Reviews and Notices of Books.

Medical and Surgical Memoirs. By JOSEPH JONES, M.D. Vol. I. pp. 820. New Orleans. Printed for the Author. 1876.

UNDER the above modest title the author of this book has included a vast range of subjects, treated in a most exhaustive and elaborate manner. Without exaggeration, we may say that the work, as the product of the labours of one man, is unrivaled; and when we consider the difficulties surrounding his position and the trials to which he has been subjected, our amazement at the amount of work here produced is greatly heightened. None will read the preface of the volume without sharing in these feelings; but when they pass to the substance of the book itself, they will, we feel sure, unite with us in styling it a wonderful production.

It is difficult to give within a short space anything approaching to a complete analysis of such a book as this; we can only indicate its scope, and refer our readers to its pages for fuller information. And first one word as to the author himself. He tells us that this is the first instalment of his investigations into various diseases, of which he has been collecting material during twenty years. Much of this material was afforded him during the civil war, when he held the office of surgeon in the Confederate army, and his investigations embrace not only clinical and pathological facts, but also a large amount of experimental observations upon animals and upon the therapeutical effects of drugs. With these original researches he has combined the results of the labours of others, so that his memoirs furnish the most complete account of the subjects treated that exists, at least in the English language.

The volume opens with a long historical introduction to the study of diseases of the nervous system, extending over 137 pages of small type. Within this compass, which by itself would fill an ordinary octavo volume, Dr. Jones gives a *résumé* of theories and facts relating to the physiology and anatomy of the nervous system from the very earliest times down to the present day. It is, of course, a mere compilation, and as such it may be held to be too diffuse, but it is no less of value, for in it the authors quoted are made to speak for themselves. From Aristotle to Hitzig and Ferrier, there is not a name omitted from the long line of physiologists: all are given full space for their doctrines, although perhaps undue prominence is given to some.

This introductory chapter is, however, nothing as compared with the papers that make up the bulk of the volume. The first of them, entitled "Investigations on the Nature, Causes, Relations, and Treatment of Traumatic Tetanus" (pp. 138 to 407), is a long and exhaustive treatise, of which we can here only indicate the bare outlines. The essay—if essay it can be called—opens with full and elaborate details of a case, taken as illustrative of the natural history of the disease, in which, among other minutiæ, there are detailed no fewer than seventeen quantitative analyses of the urine at different periods of the case, which was under treatment for two months with good result. The conclusion arrived at from the study of this case may be quoted in the author's own words:—

"The essential phenomena of inflammation and fever were absent; the symptoms were exaggerated manifestations of nervous and muscular actions rather than results of structural alterations; an irritation in a distant nervous branch was propagated to the spinal cord, and the disease, after its establishment, appeared to be dependent upon an undue excitability and increased action in the entire spinal ganglia as manifested in the greatly exaggerated reflex actions; the disturbance or increased activity of the ganglionic cells of the spinal cord was reflected to the sympathetic nervous system, inducing deranged action of the heart, obstinate constipation of the bowels, and increased activity of the skin."

Upon this text the author founds the whole of his memoir, proceeding to discuss seriatim all the phenomena of the disease. Starting with the question of temperature, he dwells first upon the statements of the ancients, and then upon those of modern writers, in support of his own views. Here, as elsewhere in the book, he has full scope for displaying the fruits of his antiquarian research, which it is right to say has scarcely been equalled in its extent and breadth. Submitting every phenomenon to the test of authority, he is too impartial to commit himself too exactly to any particular individual's views. As in the passage above quoted, he arrives at the conclusion, both from personal study of cases and from the writers he has consulted, that heightened body-temperature is in tetanus only an epi-phenomenon, and no indication of a pyrexial state. Passing next to consider the part of the nervous system involved in traumatic tetanus, he argues against the view which would localise the affection to the spinal cord alone, pointing out that if the experiments of Ferrier and Hitzig are to be accepted, they would militate against this doctrine. Moreover, he gives instances in which tetanus supervened upon cerebral and cerebellar injury. Examining next, at equal length and with equal display of learning, the views propounded upon the production of the tetanic state, and its relations to injury of peripheral nerves, he arrives at a long series of conclusions, the sum of which is that by means of a peripheral excitation the spinal cord, medulla, and cerebellum are thrown into a condition of "over-exalted functional activity," which shows itself not only in motorial, but also in sympathetic disturbances. Other sections are devoted to the derangements of the digestive, circulatory, and respiratory functions, and one of the most valuable sections is that in which he treats of the changes in the urine in tetanus. The chapter on the Pathological Anatomy of Tetanus is perhaps the fullest record of what is still an obscure subject, and derives its value from the great pains taken to collate all the observations extant on this subject. It, however, amounts to but little more than this—that in tetanus there is a condition of dilatation and congestion of the bloodvessels of the grey matter of the cord and medulla. The relations of tetanus to other nervous diseases—as cerebro-spinal meningitis and epilepsy—are next considered; and the author digresses to discuss fully the various theories on the epileptic state propounded by Van der Kolk, Brown-Séquard, Echeverria, Jackson, and others, concluding this section by an inquiry into modifying influences, as of climate and other external agents. The next chapter contains much original matter, comprising full details of a large number of experimental investigations into the action of physical agents, and of certain drugs, as hydrocyanic acid and strychnine, upon the animal economy. The essay concludes with a chapter upon treatment, when again the reader is confronted with a detailed historical summary, and a tabular statement of 400 cases. The drugs he most relies upon are chloral, Calabar bean, chloroform, and ether; and also, but as of less value, Indian hemp, tobacco, bromide of potassium, and opium. So much labour has been bestowed upon this elaborate essay, which fills upwards of 300 pages, that it would be hard to give it anything but praise. The reader—if, indeed, one can be found to peruse it patiently—will, however, often feel that the author is too diffuse in his style, and too profuse in his quotations.

The subject of cerebro-spinal meningitis, considered by the author as simply a local disease and not entitled strictly to the term "epidemic," is treated with similar elaborateness in detail and breadth in research. Here, as in the previous essay, much material was afforded him by the American war. He discusses fully the relations between this affection and malarial poisons. Pneumonia, which was fatally prevalent in the Confederate ranks, forms the subject of a third lengthy essay. Many remarkable cases are given in detail. The question of malarial influence is also here discussed, and much space is given to the question of treatment. The subject of dropsy from all causes is introduced by a long disquisition upon osmosis and the absorption and action of purgatives, the volume concluding with some interesting and less tedious remarks upon mollities ossium in relation to rickets and cancer.

Such is a meagre outline of the varied contents of this bulky volume. Encyclopædic in extent, it is written in too discursive a style, and travels over far too much ground to be widely read, but to those who happen to be working at the subjects therein discussed, and who have neither time nor opportunity for extended historical research, the help derived from this book will prove of great service. The great merit of the work lies, however, in the circumstances under which it has been compiled, and coming to us from the banks of the Mississippi, this reflection of research in all ages, combined with the arduous investigations undertaken in a truly scientific spirit by the author himself, deserves not only grateful recognition, but also unqualified praise.

Mémoires sur la Galvanocaustique Thermique. Par le Dr. A. AMUSSAT, Fils. Avec 44 figures, intercalées dans le texte. Paris: Germer Baillière. 1876.

IN this treatise the author has collected his writings upon the employment of the galvanic cautery in surgery, prefacing the memoirs by an interesting historical account, in which he does full justice to those who, like Mr. Marshall in this country and Middledorf in Germany, have been chiefly instrumental in the introduction of this valuable surgical aid. M. Amussat's personal experience of the galvanic cautery has been extensive, and he relates in detail several cases, including fistula, strictures of urethra and rectum, phimosis, castration, and one even of tracheotomy (for the removal of a foreign body from the trachea), in which he has employed this agent. One of the memoirs is devoted to the removal of pedunculated tumours of the skin, and another to cancer of the cervix uteri, which unfortunately is seldom brought under the surgeon's notice until it is past operative measures. The treatise is an instructive one; it is, moreover, admirably printed, and is copiously illustrated.

OUR LIBRARY TABLE.

Legal Chemistry. A Guide to the Detection of Poisons, Examination of Stains, &c. &c., as applied to Chemical Jurisprudence. Translated, with additions, from the French of A. NAQUET, Professor to the Faculty of Medicine of Paris. By J. P. BATTERSHALL, Nat. Sc. D.; with a Preface by C. F. CHANDLER, Ph.D., M.D., LL.D. New York and London: Trubner and Co. 1876.—This little book is as clear and concise as a book can be. The analytical methods selected are, for the most part, well chosen and well described. Many of them could be performed with ease by medical practitioners, to whom so simple a guide will no doubt be valuable. Nevertheless we wish the book had been larger. In nothing is minute attention to details more essentially necessary than in medico-legal inquiries, and it is obvious that few details can be given in a post octavo volume of 156 pages. The scope of the book is, moreover, a little too wide. It was, we think, a mistake to include food adulteration, for though a few useful hints might be conveyed, any adequate discussion of the subject in thirty pages was, of course, impossible. The best portions of the book are those which deal with less hackneyed subjects. Thus we have interesting sections on the determination of the natural colour of the hair and beard; on the examination of firearms, with directions for finding approximately the time that has elapsed since a gun was fired; on the examination of human remains in the ashes of a fireplace; of writings for fraudulent alterations, of coins for sophistication, and of articles of dress for blood and seminal fluid. All these sections are excellent, and would render the book valuable if it contained no other useful matter, which, however, is far from being the case.

Quantitative Chemical Analysis. By Dr. C. REMIGIUS FRESENIUS, Privy Aulic Councillor, Director of the Chemical Laboratory at Wiesbaden, &c. Translated from the Sixth German Edition by A. VACHER. Seventh Edition. 1876. Churchill.—Fresenius's two great works on Analysis are so well known to students of chemistry in all parts of the world that the advent of a new edition of either of them does not call for much remark. They are wonderfully comprehensive, clear, and accurate; and each new edition, as it appears, contains so good an account of all the most important discoveries and improvements that the most courageous chemist might shrink from the attempt to supersede it. The present volume contains only the general part, the latest German edition being as yet unfinished. It contains much new matter and many new illustrations, and is quite large enough for convenient use. Mr. Vacher, himself a pupil and friend of Fresenius, has, as usual, performed his part as translator with care and skill. He tells us that the old notation is retained "at the express wish of the author, who states that he shares with the highest authorities in Germany 'a most firm conviction that for inorganic chemistry it is the simplest and best.'" There is some truth in this perhaps, but the new notation has been adopted in England almost universally, and we fear that a good deal of inconvenience will be caused to students by the great analytical text-books remaining exceptions.

Introduction to the Study of Chemical Philosophy, the Principles of Theoretic and Systematic Chemistry. By WILLIAM A. TILDEN, D.Sc. Lond., F.C.S., Lecturer on Chemistry at Clifton College.—This is another of Messrs. Longmans' "text-books of science," which is equal to saying that it is a valuable and concise little manual. It is devoted to general principles, such as the molecular theory, diffusion, spectrum analysis, chemical action, the laws of combustion, and the classification of elements and compounds. It is so well written as to be actually readable—an unusual thing in a text-book,—and will be a great boon to the more intelligent students, who, having got through the first elementary text-book, such as the smaller Miller or Roscoe's "Elements," wish to carry their study a little deeper. The chapter on Equivalents and Atomic Weights is one of the best, and explains very clearly some matters which are often ill-understood even by students who have made great progress in chemistry. The large number of exercises scattered through the book will also be of considerable advantage to the student. They would, we think, have been even more useful if the solutions, at any rate of a certain number of them, had been given at the end of the book.

Through Bosnia and the Herzegovina on Foot during the Insurrection of 1875, with an Historical Review of Bosnia, &c. By ARTHUR J. EVANS, B.A., F.S.A. London: Longmans, Green, and Co. 1876.—This is a well-written and interesting work, especially at the present time, and very different from the ordinary run of books of this description. It has a map and numerous illustrations from photographs and sketches by the author, and we can commend it to our readers as giving a very good insight into the causes of the present political situation, and as conveying a large amount of information in an agreeable and interesting style.

A Course of Practical Chemistry, arranged for the Use of Medical Students. By WILLIAM ODLING, M.B., F.R.S., Fellow of the Royal College of Physicians, Vice-President of the Chemical Society, Waynflete Professor of Chemistry in the University of Oxford. Fifth Edition. London: Longmans, Green, and Co. 1876.—We are glad to have at last a new edition of Professor Odling's convenient little text-book. It contains enough—and not too much—for the three months' course of practical chemistry which medical students are expected to attend. A better arrangement might, we think, have been adopted in the chapter on analytical chemistry, but those on toxicology and animal chemistry are excellent.

VETERINARY REPORT.

THE annual report of the Veterinary Department of the Privy Council Office has been published. We find that in 1875 this country was free from cattle plague and small-pox, but sheep-scab prevailed to a considerable extent in England and Wales, and to a less extent in Scotland. Glanders and farcy necessitated the killing of 1000 horses affected in England with these diseases, but few cases from Wales and Scotland were reported. The number of outbreaks of pleuro-pneumonia which were reported in Great Britain was 2492, and the number of cattle attacked was 5806. Returns of foot-and-mouth disease have not been furnished for the last four years, but it was decided at the end of last year that all the local authorities should be requested to furnish the department with monthly returns, showing the number of cases of this disease in their respective districts. The importation of foreign animals into Great Britain during the year was considerably greater than in 1874, the cattle showing an increase of 70,409, and the sheep an increase of 228,187, but the importation of swine decreased by 42,240 head. It was stated in previous reports that no direct connexion had been shown to exist between the wholesale price of meat and the price which the ordinary consumer is required to pay for it, and it appears that "this mysterious problem still remains to be solved." During the year three more travelling inspectors were appointed, whose duties consist in visiting all parts of the country, and, with the assistance of the local inspectors, in ascertaining that the Orders in Council relating to the transit of animals, both as regards disinfection and the prevention of cruelty and suffering, and markets, fairs, &c., are efficiently carried out. Several inspectors were also added to the staff of the department. The local authorities had 1777 inspectors holding appointments on the 31st December last, of whom 372 were members of the Royal College of Veterinary Surgeons, 70

had obtained the certificate of the Highland Society of Scotland, 1091 were officers of police, and 244 appear to have possessed no special qualification for the office.

REPORT
OF
The Lancet Sanitary Commission
ON
ENGLISH WATERING-PLACES.

RAMSGATE.

PARTICULAR interest is attached at the present moment to an investigation into the sanitary condition of Ramsgate. For some years past Ramsgate has held a high position among English watering-places, both on account of its lowness of death-rate and its freedom from outbreaks of zymotic disease. For the first half of the present year, however, this good repute has been forfeited, for not only has the total death-rate increased, but the deaths from zymotic disease have been excessively high, as the following table, allowing for the increase of population, shows:—

	1874.	1875.	1876.
Death-rate per 1000 for the half-year ending June 30th	12·4 ...	14·6 ...	17·7
Zymotic death-rate per 1000 for the half-year ending June 30th	0·78...	0·25...	3·6

The increased mortality of the past half-year was due, in the first quarter, to measles and whooping-cough, and in the second to scarlet fever. The outbreak of the latter disease, which occurred in the second, or spring, quarter, has created considerable alarm among the public, and there is no doubt the real facts have been considerably exaggerated. In attaching importance to an increased death-rate from zymotic disease during any period, reference must be made to prior conditions. A prolonged immunity from measles, whooping-cough, or scarlet fever is, sooner or later, certain to be compensated by an increase proportionately great, because during the years of immunity the population susceptible to these diseases has continued to increase. It must also be borne in mind that the first quarter of the year, from its inclemency, was extremely unfavourable to children suffering from such diseases as whooping-cough and measles, whilst the mortality from scarlet fever has never been excessive. That the high death-rate from zymotic disease has been caused rather by an increase of a population susceptible from prior immunity than from insanitary conditions is shown, we think, in the fact that the scarlet fever outbreak is limited chiefly to one of the suburbs of the town, that no case is known to have occurred in any of the numerous schools that are located there, and the disease has never assumed formidable proportions, has been easily dealt with by ordinary precautions, and has showed a tendency to decline. Had the sanitary conditions of the town, then, been extremely bad, or had the epidemic alluded to arisen solely from such insanitary conditions, we think that not only would the outbreak in the first instance have been more fatal, but that, instead of declining, the advent of visitors in June and July would have been signalised rather by an extension of the disease. By this defence we do not wish it to be understood that we have no fault to find with the sanitary conditions of the town—indeed, the report of our Commissioners would speedily undeceive us in that respect; but we wish it to be understood that the high death-rate of the last two quarters is to be regarded rather as an exceptional occurrence than as evidence that any great default in sanitary management has occurred since 1874 and 1875. The result of our inquiry will be to show that Ramsgate, both as regards its natural advantages and sanitary regulations, is still entitled to stand high in the list of English watering-places, but that there are defects in the latter arrangements—serious defects—which detract considerably from its excellence in the former respect; defects which even now interfere with the comfort of its visitors, and, if not remedied, must ultimately lower its position to a secondary one among our health resorts.

Ramsgate may be said to consist of the town proper of Ramsgate, containing a population, estimated to April of the present year, of 16,000 inhabitants, and the adjoining suburb of St. Lawrence with a population of about 4000. The Registrar-General's return for Ramsgate is also made to include the parishes of Broadstairs and St. Peters. The two latter, of course, in the present inquiry are not regarded. Ramsgate faces nearly south-east, though there are aspects in the town which are south and south-west. The climate is dry and bracing, and for two-thirds of the year suitable for invalids. The season extends from June to September, but an increasing number of visitors frequent the town during a second season from October to the end of November. Ramsgate stands directly on the chalk, and the chief residences are built on two cliffs known as the East and West Cliffs; whilst the shops, main streets, and poorer residences lie in the declivity between them. The suburb of St. Lawrence is immediately adjacent, and may be said to form an outer zone to the town. The sanitary management of Ramsgate is in the hands of a local board, and the details are entrusted to a medical officer of health, Mr. James Barry, and three inspectors, the chief of whom is the surveyor of the board, and whose professional knowledge in detecting the cause of nuisances arising from defective drains, &c., and suggesting remedies, Mr. Barry speaks of in the highest terms. The suburb of St. Lawrence is under the control of the Thanet sanitary authority, but the medical officer of health resides at Dover. Such an arrangement is practically absurd; for St. Lawrence is in reality part and parcel one with Ramsgate, and this divided authority is most injurious to the latter. St. Lawrence has no drainage, all the sewage being received into cesspools. The houses are being rapidly erected, and certainly, as far as we could judge, without due supervision; whilst, owing to their disconnexion from their sanitary centre, epidemic diseases can spread there without cognisance being taken of them. The recent scarlet fever outbreak commenced there, and it was not till nearly a week had elapsed that the medical officer of health for Ramsgate was aware that the dangerous disease was so close on his quarters. The first intimation he had was through a dispensary patient, and on visiting the house he found the disease had already been manifested for more than a week, and that neighbours with children in their arms were frequently entering the dwelling; yet, till he had communicated with the distant sanitary authority, there could be no possibility of properly enforcing isolation and preventing its spread to his own district! St. Lawrence, so long as the present conditions subsist, must be regarded as a source of danger to the town of Ramsgate, independently of its considerable contribution to its death-rate.

Ramsgate proper has a system of sewerage, more or less complete. The sewers are fairly well ventilated, especially those on the East Cliff. Ventilation of the sewers is particularly called for at Ramsgate, as, owing to its situation on the cliffs, the sewer gases ascend with great force, and intensify at certain points. The outlet of the main sewer is directly in front of, and about 400 feet from, the West Cliff and West Pier, and at low water is plainly visible. Such an arrangement is an abomination. We doubt very much if, even with strong ebb tides, much of the sewage is carried out to sea; whilst the experiments of Mr. Ellice Clark, late surveyor to the Board, showed that a float "placed 100 feet seaward of the existing outfall went directly to the harbour's mouth, and would have entered had the tide been flowing." The same gentleman states "that personal observation has led him to the conclusion that the sewage is at present disposed of partly by going to sea, partly by deposit on the foreshore (*eventually** carried away), and partly by entering the harbour and remaining on the bank at its entrance." We may observe that the Paragon Baths are situated close to the sewage outfall, and we have also learnt that water for baths for private houses has been taken close to the

* The italics are our own. We think the sea-gulls have something to do with the ultimate removal.

same spot! The drains are flushed three times a week during the season, and several flushing tanks have been recently constructed for the purpose; at present, however, the flushing is perfectly inadequate to the requirements of the sewers, and the sewage at the time of our visit to the outfall cut seemed to be in a highly concentrated state. It is stated that 50,000 gallons of water are used weekly for flushing purposes; in our opinion, that quantity should at least be used daily, and the flushing should be repeated at the ebb of each tide. The Board of Trade have complained that sewage enters the harbour. We think that, as far as the outer harbour is concerned, some portion of it does so. But that fact does not excuse the Board for the disgraceful condition of the inner harbour. At low water the stench there is abominable, and is even perceptible when the harbour is full. For years past this basin has been receiving the sewage and refuse from numerous fishing-smacks, yachts, coasters, &c., and from privies and urinals on its banks, and no attempt has been made to clear it. We have no hesitation in saying that the condition of this basin is the worst sanitary fault in Ramsgate, and it is a disgrace to the Government officials, having it under their control, to have allowed it to fall into its present filthy state, or permit it to remain so, to cause annoyance and even injury to the town and its visitors.

Ramsgate is supplied with water by a public company. The supply is obtained from a well (104 feet deep) sunk in the chalk at Whitehall, about a mile and a half from the town. Analysis of this water shows that it is remarkably free from organic impurity; the temporary hardness is about 12°, and the permanent hardness about 5°, of Clark's scale. The water is pumped from the well to a covered reservoir at Southwood, about a mile distant, capable of containing 650,000 gallons. If this quantity were distributed daily, it would be sufficient for the ordinary population of Ramsgate and St. Lawrence (part of which is supplied by the company) with 30 gallons per head, and supposing during the season the population to be doubled, with 15 gallons. But nothing like this quantity is distributed. We gather from evidence given last year before a committee in the House of Commons that the daily average supply to the town during the five full months of the year was, for June, 392,000 gallons; July, 432,000 gallons; August, 427,000 gallons; September, 380,000 gallons; October, 377,000 gallons; or a daily average supply of 401,600 gallons, or only 20 gallons daily per head for the normal population, and 10 gallons if visitors are included. Such a supply is monstrously inadequate, and the quantity that can be used for watering and flushing purposes must indeed be a mere dribblet. The supply is intermittent. We have so often commented on the dangers and disadvantages of such a service that we need not enlarge upon them on the present occasion. The local board are anxious to adopt the constant system of supply, and the water company are willing to grant it. Difficulties, however, on this point have arisen, into which we cannot enter now, but content ourselves with saying that the board ought to pay a fair price for good water, and that the company are in duty bound to provide a supply adequate to the requirements of the town. Whilst speaking of the water-supply, it is satisfactory to notice that the private wells in the town are nearly all closed. A few years ago there were no less than 130 wells open, but the medical officer has succeeded in reducing that number to twelve.

Hitherto our remarks have dealt chiefly with the deficiencies of the town; we now turn with pleasure to the brighter side of the picture. We have already alluded to the great natural advantages of situation that Ramsgate possesses; it is also fortunate in possessing an active and, as far as its means permit, a liberal sanitary authority, and they are ably assisted by their medical officer of health, Mr. James Barry. Recognising that many insanitary conditions arise from local defects in the arrangements of private houses, they have taken in hand a house-to-house visitation, for the purpose of detecting sanitary defects and enforcing the remedies; this duty has been undertaken by Mr. Etheridge, one of the inspectors of nuisances, and who devoted much of his time to us during our inquiries, and we therefore are pleased to bear testimony not only to his fitness for the office, but to the zeal he seemed to throw into the work. Another inspector has also especially been engaged to look after cases of infectious disease, to see that no unnecessary communication is allowed to take place between the healthy and the sick, and to disinfect the houses and clothing of those attacked. The sanitary authority have recently erected an "oven" for the disinfection of clothing, bedding, &c.; and they have, conjointly with Margate, Broadstairs, and St. Peters, determined to establish a hospital for the prompt isolation and treatment of infectious cases, on a site two miles from the town. The scavenging seems to be fairly well done, considering the immense stress thrown on the town during the summer months; the refuse is supposed to be collected from houses at least once a week. There seemed to be a want of public urinals on the promenades; the urinous odour and unsightly stains there were very noticeable on the morning of our visit; these might, however, in some respects be due to the rough-and-ready habits of the excursionists. This class of visitors are a great detriment to the town, not only by annoying the more respectable class who are really the true support of the place, but also by the actual introduction and origination of disease. No sanitary supervision can be exercised over such a fleeting mass. It is no uncommon thing for poor people, either themselves or children, when barely convalescent from some infectious complaint, to take a day's airing at the seaside, and, on the crowded boats or in closely-packed railway carriages, come in contact with others susceptible of taking the disease, and distribute the poison that still hangs about their clothes or persons. And even if no contagion is conveyed, the crowded condition of the cheap lodging-houses, where, to use the graphic expression of the medical officer of health, they "pig it," must cause a considerable amount of sickness. Excursionist traffic, though undoubtedly a great boon to the poorer population, is also a great public danger. In concluding our remarks on Ramsgate we must notice an excellent institution that has recently been established—the Infant Summer Nursery. The death-rate of a town is always considerably swelled by the infantile mortality, especially that arising from diarrhœa, the result of bad sanitary conditions, improper feeding, and general neglect. The Infant Summer Nursery has been established by some benevolent ladies for the purpose of taking charge during the day and supplying with proper food the infants of mothers who are busily engaged during the season, either in service or in attendance on their own lodgers. They have secured admirable premises, simply fitted up, kept scrupulously clean, and the whole put in charge of a kindly-looking matron with a few elder girls as nurses. We have not seen such a cheerful, wholesome sight for a long time, and we hope all visitors will contribute to its extension and maintenance.

In conclusion, we would urge upon the Ramsgate authorities not to content themselves with mere sanitary inspection and supervision, but to enter boldly upon schemes for the improvement of drainage and water-supply. The first step they ought to take is to incorporate the suburb of St. Lawrence into their urban district, and to provide that place with a proper system of drainage. Next, they ought to take steps for the removal of the present outfall, either by a continuation further out to sea, or, better still, by conveying the sewage three or four miles from the town to the marshes between Ramsgate and Sandwich for the purpose of irrigation. The water-supply must be increased in quantity. The Company ought to be able to furnish at least twenty gallons daily per head for the whole population, including visitors, during the summer season. To do so would require about 200,000 gallons a day more than their present reservoir is capable of holding. If that supply can be guaranteed, then the service should be made constant, but not before, for a constant service with an occasional intermittence is highly dangerous. Lastly, steps should be taken to compel the Board of Trade to clean out the inner harbour at least twice a year. If these measures are promptly carried out, Ramsgate will maintain her position in the first rank for healthiness among English watering-places, and will continue not only to attract her usual crowd of summer visitors, but will add to the numbers of those who seek for a sojourn during the shorter and pleasant autumn season, or for a permanent residence.

Since the above was in type, we have learnt from the medical officer of health that, subsequent to his last report, noticed by us last week, six cases of scarlet fever have occurred in the town; these are of an extremely mild character, and the disease is showing no disposition to spread.

THE LANCET.

LONDON: SATURDAY, AUGUST 19, 1876.

THE "Balham mystery" has not been solved, but it has been converted into a scandal. Instead of a sober inquiry into the "cause of death," there has been an ill-conducted and most loathsome exhumation of all the discreditable details which a ghoul-like industry could bring to light from the depths of a story of folly and wickedness which in the interests of public morality might well have been buried out of sight. That a further inquiry was indispensable no one could doubt, but that the duty of prosecuting the search should have been entrusted to a court already discredited, or that it would be permitted to take the form of an inquisition into character in place of a quest as to the manner and cause of death, probably no reasonable person anticipated.

When the Attorney-General moved the Queen's Bench Division of the High Court of Justice for a writ *ad melius inquirendum*, it was distinctly alleged on behalf of the Treasury that there were good grounds for believing evidence tending to the ends of justice, either avenging the dead or exonerating the living, would be elicited. We now know that no such expectation was justified. So little did the facts bear upon the only question which a Coroner's Court was the fitting tribunal to investigate, that the solitary circumstance of a groom being discovered who had used antimony for his horses created something little short of a panic, provoked a solemn declaration that further inquiries would be necessary, and was held to call for a sudden adjournment. It was with unfeigned surprise counsel holding briefs for the Treasury—we will not say the Crown, for of course there was no prosecution—found themselves face to face with a new fact, and it would scarcely be too much to add they were so bewildered that they failed to perceive how to use it. In a word, this second inquest has been a blunder and an unseemly exhibition, scarcely if at all less objectionable, or in any useful sense better, than the first. It has been called a "fishing" inquest: the epithet is uncomplimentary, but it not inaccurately describes the only discoverable purpose and characteristic of a proceeding badly conceived and badly executed.

The disclosures effected have not advanced the interests of justice. The Treasury officials, who very inadequately discharge the duties of a public prosecutor, will hardly find their task simplified if they contemplate further action. Their stock of knowledge has not been increased, and their power of legal proceeding is no way enlarged. In a word, money and—what is more important in a case like this—time, have been wasted. Meanwhile prurient curiosity has been stimulated and gratified, and public morals have neither been elevated nor advanced.

The medical questions arising out of the case may be stated thus. What was the immediate cause of death? Assuming it was poison, did the deceased take it wilfully to destroy life, or with some other purpose? Supposing he did not take the poison knowingly, did he do so accidentally, or was it administered to him? If the last-mentioned hypothesis seem to be the true one, then how and by whom was it given? We propose to examine the *medical* evidence—that alone falls under professional cognisance,—with a view to ascertain what measure of light may be thrown on these queries by the special testimony.

What was the immediate cause of death? The evidence relating to this question groups under two heads—that furnished by the patient's condition and symptoms during life, and that supplied by the appearances of the body, and facts ascertained by analysis, after death. We do not propose to recount the history of the case, but simply to note points of interest in connexion with the topics named. The earliest indications pointed to poison rather than disease. It is remarkable—and we doubt whether that feature of the case received adequate attention at the time or afterwards—that, *previous to the arrival of the medical man* who first appeared on the scene, the patient was treated for *poisoning*. A mustard emetic had been administered! Supposing a person to be suddenly attacked with vomiting and faintness, that is by no means a remedy likely to be instantly applied, least of all in a family with homœopathic proclivities. It is necessary, therefore, to assume—indeed, the inference is forced upon us—that either the patient *did* make a statement as alleged, to the effect that he had used poison, or it was known or suspected by the person directing the use of a mustard emetic that he had taken something which would require to be removed from the stomach by a powerfully stimulating appliance to produce vomiting. The hypothesis that the patient himself knew or believed that he had taken poison is further supported by the circumstance testified by one witness, that he called loudly for warm water; although the statement alleging that the words used were "Florence, Florence, hot water!" is hardly consistent with the evidence given by another witness, to the effect that the patient said, "Mrs. COX, I have taken poison for Dr. GULLY. Don't tell Florence." We think there is an obvious contradiction here which might fairly have been expected to strike the medical men in attendance, and if it had struck them, an explanation might have been requested and furnished during the life of the sick man, and possibly led to other revelations by the way. This, unfortunately, is not the only point overlooked, although it would seem unlikely to have escaped the attention of persons coming upon the scene, knowing or being told that there was a suspicion of poisoning, and therefore presumably on the alert to clear up the mystery, at least so far as it was in the interest of the patient to ascertain what he had taken and how and when he took it.

Perhaps it will be as well to point out at this stage the principal matters which we think were at the time overlooked, and probably on that account finally sacrificed. We make full allowance for the confusion inseparable from a scene of this character. It must, however, be borne in mind that medical men trained to deal with emergencies of the class, and especially instructed in the details of conduct and per-

sonal obligations arising out of a case of illness which *may* be poisoning, are expected to be self-possessed in the midst of domestic confusion. The circumstance that a mustard emetic had been administered would necessarily suggest the question "Why?" It is a remedy *never* given by lay people except a patient is supposed to have taken poison. There was, moreover, another indication: strong coffee had been administered, or at least prepared! That is a remedy used chiefly, if not exclusively, when the poison taken, or supposed to be taken, is also thought to have been a narcotic. These popular remedies are so well and widely known that it is not too much to say, any practitioner called to a case in which such remedies had been employed before his arrival would naturally first send for a stomach-pump, and then search for the matter vomited. Neither of these obvious and imperative steps appears to have been taken. The patient lay in a condition of collapse, and all this time absorption, as every tyro in physiological science must know, was proceeding rapidly. Had the vomited matter been discovered and tested at once, as it might have been; had the stomach been washed out effectually; or, in other words, had the directions given for *every case of suspected poisoning* been followed, much of what happened might have been prevented. If it be replied the case did not present the characteristics of poisoning, we can only repeat—the measures taken before the arrival of the medical men were significant as to what those likely to be best informed supposed it to be. And these measures were of a nature which would not certainly have occurred to lay people unless the knowledge or suspicion suggesting them had been well-nigh conclusive. It has been complained that the medical men were not informed sufficiently early as to the supposition that Mr. BRAVO was poisoned. We think they *were* informed by the plain purpose of the measures adopted before they arrived, and, without waiting to be told, they ought, in fact, to have inquired. It is, moreover, in evidence that the medical man first on the scene thought the patient "looked as if under a narcotic poison," although "he could not find the usual symptoms." Unfortunately, however, the obvious course was not followed. When other medical men who, it is fair to assume, were well acquainted with the proper course of procedure in a case of this nature, arrived, the method taken was scarcely more satisfactory. It was probably too late to count on success for any remedial measures which might be adopted in aid of the patient, but the eminently wise and useful adage "while there is life there is hope" certainly ought to be a governing maxim of medical practice. We have no doubt that everything that could at this stage be done to relieve the patient was attempted, but the efforts to ascertain the particular poison taken, and to discover how and by whom it was administered, were strangely unsatisfactory.

It is impossible to disguise that a grave omission was made in not at once applying the proper chemical tests to the matter vomited and that passed from the intestines. This default is the more inexplicable because some of the matters thrown off were actually tested for arsenic, and, arsenic not being found, no one seems to have thought of antimony. If the test applied was that known as REINSCH'S, which consists in boiling the suspected matters with dilute hydrochloric acid and a piece of bright copper, there would probably in this case have been a coating on the copper, which, not being arsenic, might have been antimony—in fact, the alternative "irritant poison" suggested by the symptoms. However that may be, there is something extraordinary in the circumstance that, the need and propriety of testing the ejecta being recognised, the test was not so applied as to leave no doubt as to the poison taken while the person who, perhaps, alone could explain this mystery still lived. Had anyone been in a position to say pointedly to this poor man, who was conscious after his recovery from the first collapse up to within a very short period of his death, "You have taken antimony," the truth might have been ascertained. In any case the need of at once impounding all bottles and glasses, searching the rooms, the clothes, the belongings and surroundings of the person dying of poison, at the time of his illness, instead of a month or two after his death, should certainly have been perceived and acted upon. As it was, the opportunity is lost.

We may take it that the symptoms during life were incompatible with the hypothesis of natural disease, that they pointed strongly to the action of an irritant poison, and that the only practical question would be what this poison was. No discredit could attach to such a general diagnosis, even though there may have been some hesitation in determining whether the poison was arsenic, bichloride of mercury, or antimony in the form of tartar emetic. The post-mortem examination, as we know, afterwards showed the absence of any natural disease, and it disclosed evidences of mischief inimical to life, and probably due to the secondary action of an irritant in course of elimination. The chemical tests applied revealed the presence of antimony; and the only questions left to be determined are those set out above, and dependent on the assumption that the cause of death was poison. Before we can pass to the discussion of those questions, duty compels us to indicate certain discrepancies in the medical evidence which, for the credit of the profession, cannot be too speedily explained. The notes taken in shorthand by responsible officials are before us, and the quotations it will be necessary to make shall be made from this authoritative transcript of the evidence. Perhaps it will be as well to place the seemingly contradictory passages in juxtaposition, and reserve our remarks until afterwards. In the evidence of Sir WM. GULL occur the following conflicting statements. We do not reproduce them in order, but so as to show their antagonism:—

"You drove down to Balham with Dr. Johnson?—Yes.

"Did he communicate to you the symptoms of the patient?—Yes.

" ..... I think the Court should know that in a case like this, when you are called suddenly to the bedside of a man—and I did not retire for consulation on this point; I did not retire to consult with my colleagues—I, upon my own responsibility, and without conferring at all with the gentlemen I met, told the dying man at once, 'You are dying, and of poison.' And I did that on my own responsibility, that nobody else should be blamed for such a statement; because it was a very grave statement to tell a sick man; and therefore, without any consultation, and taking the responsibility entirely on myself, I said to the dying man, 'This is not disease—you are dying, and of poison.' The words were, 'This is not disease—you are dying of poison.' Remember, I was taken to his bedside to see him for disease.

I was not taken to his bedside to see a man dying of poison. I should never have been sent for for that.

"Had not Dr. Johnson told you, as you drove down, that it was an irritant poison of some kind?—He said he thought it was an irritant poison.

"Did he tell you he had tested for arsenic?—Yes, and could not find any, and that had thrown him off the scent.

"Your conclusion that he (Mr. Bravo) was ill of ordinary disease, and not from poison, was not from what you were informed, but an inference you drew?—From her (Mrs. Bravo's) note I thought he was ill; *from Dr. Johnson I inferred he was dying of poison.*

"You have heard of this important statement of Mrs. Cox, that he (Mr. Bravo) told her, when he was first taken ill, that he had taken 'some of that poison'?—I have heard *a rumour* of it, but I *know no more* than rumour. *I knew when I went* that he said he had taken poison. I heard nothing of 'that' poison.

..... I believe I heard it first in the room where Dr. Johnson was sealing up the jar; I believe so; I believe Dr. Johnson was sealing up the jar. Mrs. Cox stood as it might be there; I stood here; and I think *Mrs. Cox repeated the statement then and there.*"

These are by no means the only wonderful statements in Sir WILLIAM GULL's evidence. We pass over for the moment the strange misconception under which this consulting physician appears to labour as to the obligation which rests upon one medical man acting with others. That is a matter of great gravity, which it will be needful to discuss apart as a question of etiquette and professional decency. For the present we are chiefly concerned with the question of consistency. Dr. JOHNSON was recalled at the inquest, and gave a specific contradiction to more than one of Sir WILLIAM GULL's assertions. We think it may be claimed that the following questions are substantially those the majority of Sir WILLIAM GULL's professional brethren are asking, and which it will be due to them to answer as completely and clearly as the case admits. How does Sir WILLIAM GULL reconcile the statement that he was not taken to the bedside to see a man dying of poison with the acknowledgment that Dr. JOHNSON on his way down told him the man had taken an irritant poison, and he had already tested for arsenic, or with the admission that he (Sir WILLIAM GULL) inferred from Dr. JOHNSON the patient "was dying of poison"? We must confess the contradiction strikes us as too flagrant to be capable of reconciliation. It is the more necessary it should be explained, because, if we are to accept that part of the averment which represents Sir WILLIAM GULL as being aware Dr. JOHNSON considered the case one of poisoning—inferring from Dr. JOHNSON that the man was dying of poison, knowing that Dr. JOHNSON had tested for arsenic,—it is impossible to understand what Sir WILLIAM GULL meant by telling the jury he took all the responsibility upon his own shoulders in saying to the patient, "You are dying of poison," more particularly as Sir WILLIAM GULL explicitly avows, "*I knew when I went that he said he had taken poison.*" If Sir WILLIAM GULL knew when he went that the sick man had said he had taken poison, how was it "a very grave statement to tell a sick man" precisely what he had said himself, and what Sir WILLIAM GULL knew when he went the sick man had said? Frankly, we can make nothing of the statement, and as an excuse for independent action without consulting the gentlemen Sir WILLIAM GULL went to Balham to meet, it is not even intelligible.

There is no room for doubt as to the immediate cause of death. Whether antimony was taken alone—that is to say, without any other drug—may be questioned. There were features in the attack which seem to point to the presence of another poison. No equally powerful drug probably is so uncertain in its mode of operation and effects as antimony in the form of tartar emetic. Not many years ago doses of ten grains were frequently given; some time further back, when physic in large quantities was fashionable, as much as twenty grains was occasionally given at once, and there is at least one case on record in which the quantity administered was greatly in excess. On the other hand, small doses have proved fatal. As a matter of history, the drug has produced the most powerful and deleterious effects in comparatively moderate doses. It is not necessary to suppose a *very large* quantity was taken in this instance, more particularly if, as may perhaps have been the fact, it was combined with a drug capable of causing the sudden and complete collapse which actually occurred, and during which the metallic poison was undoubtedly absorbed. The circumstance that the stomach and upper intestines were found comparatively uninjured, while the stress of the irritant action had fallen on the lower part of the small and the large intestines, is no doubt in great part explained by the length of time which elapsed between the first symptoms and the death; but something may be due to the manner in which the poison was taken. The worst results undoubtedly ensue when the poison is taken largely diluted into a thirsty stomach. Antimony acts specifically on the organic system of nerves after absorption. If it irritates the surface of the stomach, it is generally expelled by vomiting, and the poisonous effects, even in large doses, are small. This protective local action would be prevented or greatly reduced by certain combinations; but the consideration of these matters, involving points of great practical interest, may be conveniently deferred until we deal with the remaining questions indicated at the opening of these remarks. For the present, suffice it to say "the cause of death," or at least as much of it as was needed to prove the case one of exceeding ambiguity and importance, has been demonstrated—the introduction of a poison into the system, probably the last an intending suicide with even moderate intelligence would select. The jury in their singularly illogical verdict have gone further than this. On another occasion we will try to discover how far the conclusions to which their informal finding rather pointed than dared to proceed were justified by the evidence. We are now speaking of the verdict returned by the jury, not the formal inquisition, with which—making full allowance for the necessity of adopting the form of words prescribed by the statute—the original return scarcely accords.

THE session just passed has been tolerably prolific of business relating more or less to scientific and sanitary subjects. It will be remembered that the QUEEN's Speech at the opening of Parliament on February 8th last made no direct mention of any subject likely to interest the profession, but when the Royal Speech was being discussed Lord HARTINGTON

drew from the Prime Minister a statement to the effect that a Bill would be introduced relating to Pollution of Rivers. This single pledge has been redeemed, and as we write the Rivers Pollution Bill is becoming law. Its provisions and merits are discussed fully in another column, and we have but to record of it that, though by no means a satisfactory measure, it will, if properly worked, remove some of the grosser pollutions that have for a long time converted many of our most beautiful rivers into depositories for all sorts of abominations, thus utterly spoiling the water for potable purposes, killing the fish, and creating nuclei for zymotic disease.

No Bill to prevent the pollution of the atmosphere by manufacturers was introduced this session, although the matter was most forcibly brought before the House of Lords by the Duke of NORTHUMBERLAND and Lord WINMARLEIGH, and much useful work in the same direction had been done outside by the action of the South-Eastern, Cheshire, and other sanitary associations. A Royal Commission on the subject was, however, appointed some three weeks ago, and has already commenced its sittings.

The Merchant Shipping Bill, which has been dragged hastily through both houses at the fag end of the session, lost its interest long since for all concerned in the health of seamen, inasmuch as all clauses relating to health, accommodation, and dietary were expunged from the Bill two months ago, a distinct pledge, however, being given by the Home Secretary and the President of the Board of Trade that a Bill relating to the condition of seamen exclusively should be introduced by the Government next session, if that relating to ships became law this year. So the matter rests, it being considered as of more consequence to legislate for ships than for the men that man them. A large Blue-book recently published shows that this year has seen a great increase of scurvy in the mercantile marine, which fact was commented upon by Mr. THOMAS BRASSEY and others when the Merchant Shipping Bill was in Committee, and will doubtless be revived next session. While upon nautical matters we may remark that several questions have been asked in the House, and two or three Parliamentary returns have appeared, relative to ship-surgeons, the outcome of which is, that by a circular issued from the Board of Trade, no medical man can proceed as surgeon in a ship unless he be a "registered medical practitioner." This order practically, and as we think unjustly, excludes all men holding colonial degrees or diplomas.

Very few measures relating to social subjects have, during the last few years, created so much public interest and excitement as the Cruelty to Animals Bill, the result of a popular clamour created and fomented for the most part by the upper and middle classes of the community. The Bill originally introduced by the Government was the ostensible outcome of the report furnished by a Royal Commission that sat upon the subject early in the year, and some of its provisions were similar to those in a Bill introduced by Dr. LYON PLAYFAIR in the previous session. All particulars as to the action taken by the scientific community on the subject are so well known that they need not be recapitulated here, but it suffices to say that the Act as now framed leaves the matter very much in the position that it held before the cry against vivisection was raised. If it satisfies a popular cry, so much the better.

The most important subject brought forward in the House that directly affects the medical profession is undoubtedly the Royal Warrant respecting army medical officers, issued by order of the Secretary of State for War at the end of April. The medical service is now "unification pure and simple." The Warrant secures promotion at twelve years for the juniors, which is unquestionably a real boon, and it lays down compulsory retirement at sixty years of age for the administrative ranks, which, judging from the importance which our correspondents attach to this point, is also a step in the right direction. There are a few other and insignificant changes of a beneficial character, but the main change is one of a very revolutionary kind — namely, a short-service system, by which the future officers of the department are to be enlisted for ten years, at the end of which time they are, with the exception of six annual selections, to be relegated to civil life with a bonus of £1000. It is the almost universal opinion that this will never work, and that it will not survive many years. It is obviously open to many objections, and may be said to have already failed to realise Mr. HARDY'S hopes and intentions. We shall see whether the proposals in the same direction of the Commission on Army Promotion and Retirement generally will, if adopted, have any better fate.

The militia surgeons have had their wings clipped very considerably by a Royal Warrant dated the 12th July, the effect being to abolish the service almost completely, as nearly all the financial advantages are withdrawn.

The annual debate on the Contagious Diseases Acts, which took place on the 19th of last month, ended as usual in the rejection of Sir HARCOURT JOHNSTONE'S Bill for their repeal, and the subject was taken up so warmly by Mr. WARD HUNT on the part of the Government, that the Repeal Bill will in all probability die a natural death.

Mr. COWPER-TEMPLE'S Bill relating to the registration of women who have taken degrees in a foreign university was dropped, the Government engaging to support Mr. RUSSELL GURNEY'S Bill (which was passed) giving power to the corporations to grant degrees and diplomas to persons irrespective of sex. A Bill introduced by Dr. LUSH to regulate the employment in factories of young persons and women within a limited period after childbirth was postponed until next session.

We may fitly finish by reminding our readers that Quack Medicines formed the subject of a question put to the Home Secretary in the early part of the session. Mr. CROSS staved the matter off cleverly enough, and pleaded almost pathetically for non-interference. But the subject has its serious bearings, and the attack, we may believe, will be resumed next year. Meanwhile it is matter of congratulation to see, from the above records, as well as from those of several previous sessions, that social subjects and sanitary science now command a large and influential share of attention in both Houses of Parliament.

AMONG the measures of "practical legislation" which were promised by the present Government on their accession to power, not one was of greater national importance than

the long-talked-of Rivers Pollution Bill. The evil to be remedied was widely felt, and had the most direct bearing on the health of the people. It was known to be constantly increasing, the protests of sanitary reformers had for years been growing louder, and finally the most ample material for legislation had been collected by the labours of two successive Royal Commissions, at an expense to the country which cannot have been less than £50,000. It is, therefore, matter for regret that the Bill should have been so long delayed, that it should have been introduced at a period of the session when full discussion was impossible, and most of all, that it is so vague and fragmentary as to afford no prospect of any early settlement of the question.

When the Bill first appeared, just after Whitsuntide, we commented on its chief provisions. It has, however, been changed to some extent in its passage through Parliament, and we therefore find it necessary to summarise its clauses once more.

Part I. prohibits the addition to a stream of any solid matters. "Stream" is defined as including rivers, lakes, canals, watercourses, &c., and also the sea and tidals to an extent to be fixed by the Local Government Board. Watercourses flowing directly into the sea, and at present *largely* used as sewers, are, however, excluded. The word in italics suggests a difficulty. "Solid matter" is defined as not including particles in suspension in water.

This part comes into force on the passing of the Act, and proceedings can be taken under it by a sanitary authority or by any aggrieved individual.

Part II. prohibits absolutely the pollution of a stream by "any solid or liquid sewage-matter." Persons who have drainage-works in existence or in course of construction at the date of the passing of the Act will, however, be held exempt if they show that they are using the "best practicable and available means" of disposing of the sewage. To such persons the Local Government Board may, moreover, grant time for improvements.

This part of the Act does not come into force for a year. Proceedings under it can be taken as in Part I.

Part III. deals more tenderly with factories and mines. Manufacturers are prohibited from adding to the stream "any poisonous, noxious, or polluting liquid," unless they are fortunate enough to be offenders in this respect at the time of the passing of the Act, in which case they will merely have to show that they are using "the best practicable and available means, *at a reasonable cost*," to render the liquid harmless, to escape scot free. The words in italics were added in Committee. The provisions as to mines are slightly different. The prohibition includes solid matter, and "any poisonous, noxious, or polluting solid or liquid matter," except mere drainage-water. No distinction is drawn in this clause between present and future offenders, and all will be exempt (except those who add solids in mass) who can show that they are using the "best practicable" &c., means for rendering the noxious matter harmless.

Proceedings under this part of the Act can only be taken by a sanitary authority, and only by special consent of the Local Government Board. A paragraph was inserted in Committee giving the Local Government Board power to compel defaulting sanitary authorities to enforce the Act against factories and mines, but this valuable power was withdrawn before the Bill left the Lower House. The Local Government Board, before authorising proceedings, are directed to consider all the circumstances of the case, and particularly to take care that no material injury shall thereby be done to the manufacturing industry concerned.

Any sanitary authority who may venture to take proceedings under this part of the Act will indeed find that they have undertaken no light matter; for, by a paragraph added in Committee, any person threatened with proceedings is entitled, "notwithstanding the consent of the Local Government Board," to demand to be heard before the local sanitary authority "by himself, agents, and witnesses," and in fact is permitted to show cause why proceedings should not be taken against him. If he cannot make out his cause there will be a trial in the county court, and very probably an appeal to the High Court of Justice! On each occasion the manufacturer will no doubt have a crowd of lawyers and scientific witnesses to aid him. These must be met by others, and the result, whether successful or not, is therefore likely to have a direct and very unpopular effect on the pockets of the ratepayers.

As in the first draft, the delicate task of fixing the "best practicable and available means at a reasonable cost" for the removal of nuisances is left to the inspectors of the Local Government Board, subject to the control of the Board itself. We have on a previous occasion pointed out the difficulties attendant on this attempt to remedy the inherent vagueness of the Act, and need not repeat them, as they are tolerably obvious. Each inspector will have power to grant a certificate that the "best practicable" &c. means have been adopted, and this certificate, unless upset on petition by the Local Government Board, will be taken as conclusive evidence of the fact. This certificate is to remain in force for a period named therein, but not exceeding three years, during which time its fortunate possessor may rest in peace. In the debate on the third reading Mr. DILLWYN pointed out the danger of this last arrangement in forcible terms, and Sir H. JAMES, alluding to a verbal slip of Mr. SCLATER-BOOTH's when announcing the Bill, described the whole measure as a Bill for the better pollution of rivers, and more gravely declared that it had ceased to be a Government Bill, and had become a Bill in the manufacturing interest.

Altogether we are not surprised that the manufacturers did not seriously oppose this mild attempt at legislation. It is perhaps as well that it should pass, for it is high time that something should be attempted. But looking to its vagueness, its permissive character—for there is no power under it to compel any defaulting sanitary authority to act,—its excessive tenderness towards manufacturers, and the certain cost and doubtful issue of proceedings under it, we can at best but look upon it as a basis, and that not a very sound one, for future legislation.

THE Vivisection Bill, in its very modified form, has passed the House of Commons. We have already indicated the nature and scope of its provisions, and it is unnecessary to prolong the discussion of a subject which had been completely thrashed out even before it became the subject of debate in the House. National sentiment had been stimulated by utterly un-

founded or exaggerated assertions; and for a time audacity had its day. There was no limit to the stories of horrible cruelty alleged to be practised under the name of vivisection and a pretended devotion to science; but it was so thoroughly overdone as to defeat its object. From the first we advocated the appointment of a Royal Commission, for without a thorough investigation we were convinced that the agitation of the public mind would never be allayed, but rather increased; and, although we knew full well that animal experimentation was but a part, and an insignificant part, of a big and very complicated subject, we conceived that a full and free inquiry into the facts could not but have a very wholesome effect on public opinion. We thought, moreover, that the application of any legislation to such a subject was surrounded with difficulties; still, we were content that some restrictions or repressive measures should be applied if such were shown to be necessary, and we briefly indicated the direction which, in that case, these might take. Now we are not satisfied that the necessity for any legislation was made out, and we strongly suspect that the machinery which is to be employed will, after all, prove difficult and irritating in its operation out of all proportion to the good which will be accomplished; but we do not think the medical profession has cause to be dissatisfied with the result. The public mind was shocked by the details of experiments which have from time to time been published as having taken place abroad, and it was certainly in the interests of science that it should be shown that her progress did not involve the sacrifice of all the claims of humanity—in other words, that the alarm which had arisen and been sedulously stimulated by certain writers should be allayed, and that the rightful limits of animal experimentation should, if practicable, be defined. It is now known, or should be known, that animals are not cut up for the purposes of demonstration, that the minds of students are not brutalised and debased by being accustomed to the exhibition of animal suffering, and that physiologists, in this country, at any rate, utterly repudiate, as applicable to them and their proceedings, the alleged practices of some vivisectionists. There is no more humane profession in the world than the medical profession. It is a gross calumny to imply that their feeling of responsibility in reference to the lives and sufferings of the lower animals is less than that of any other body of men; and the original Bill was felt as little short of an insult to the profession, and naturally it gave rise to a feeling of resentful indignation. The fact that the British Association had promulgated some resolutions bearing on the subject of vivisection, and that the extent to which it was justifiable and right to have recourse to it had formed the subject of discussion from time to time in the pages of this journal, proved that scientific men were alive to the possibility of its being abused, and anxious to guard against it. If only something like uniformity of practice in regard to the use of anæsthetics, wherever possible, be a result of all the recent discussion, something will be gained. But it strikes us that the discussion of this question has begun at the wrong end, and will not stop here. One real wrong is not excused by another, of course, but there are several cruel sports and practices, which are unworthy of the name of sport, against which the opponents of vivisection, if they are honest in their convictions, should have addressed themselves. That all sport is to be characterised as cruel and unjustifiable we do not believe, but that some practices which go by the name of sport are, we can have no doubt; and we are curious to know how these are to be dealt with. What is to-day held by a few individuals is to-morrow held by a few more, and by degrees progress takes place and healthy sentiment grows and develops; at least let us hope that so it is.

Annotations.

"Ne quid nimis."

THE NEW PROPOSALS ON ARMY PROMOTION AND RETIREMENT.

THOSE of our readers who are in the military service have probably scanned the report of the Commission on Army Promotion and Retirement. The Army Medical Department is not included among the branches of service reported upon by the Commission, but it will not have escaped observation that some method of compulsory retirement is regarded as an indispensable element in any army scheme for the future. The nation, when it abolished purchase, probably failed to realise the full effect that step would have on promotion and retirement. Under existing rules the Commissioners have calculated that an officer would be nearly seven years longer before reaching the rank of captain than under the purchase system, ten years longer before becoming a major, and ten years longer before reaching the rank of lieutenant-colonel. In principle, the Commissioners say, a resort to compulsory retirement, where voluntary retirement fails, was adopted under the Royal Warrant of 1871, under which, for the sake of creating promotion, the commissions of major and lieutenant-colonel were granted only for five years. It is now proposed to extend this to lieutenants and captains, and to provide that commissions for these ranks shall be granted only for a period not together exceeding, in the whole, twenty years, at the end of which time the officer, if unpromoted, shall be retired on a pension of £200 per annum or its commuted value; and in a similar way provision is made for the compulsory retirement of field officers after certain periods of service. The Royal Artillery, which is organised differently from regiments of the Line, and presents, perhaps, more points of parallel to the army medical service, must, in the opinion of this Commission, be ruled by the same principle of procuring retirement in the lower as well as in the upper ranks; and it is contended that compulsory retirement must be resorted to if the standard periods of promotion are to be sustained. We do not know how this will work. A man obtaining his commission at twenty years of age would be forty, of course, if compulsorily retired after twenty years' service. He would, we take it, be quite unfit, as a rule, to follow any other pursuit, and an annuity of £200 per annum is a pittance; still, the commutation value of this would be £2648. In the case of military medical officers, under Mr. Hardy's new scheme of short service for ten years, a bonus of £1000 is all that can be claimed. We may fairly assume that, in the case of combatant officers, the number compulsorily retired at the end of twenty years would be relatively much less than in the case of the doctors, if only six per annum are to be selected to remain. Army rank represents so much social value, which can scarcely be said, however, of army medical rank, and no one can tell what might be the effect of these proposals. It is just possible that if combatant officers received no pay, there would still be candidates; at any rate, the competition for commissions in the army is something remarkable,

and it cannot be the pecuniary value attached thereto that tempts men. If the proposals of the Commission be carried out, we can only hope that greater success will attend them than has attended the practical trial of a somewhat allied principle in the army medical service.

THE LATE INQUEST ON A LUNATIC SURGEON.

AN inquest extending over several days has been held on a late inmate of the Camberwell House Asylum. The reports of the inquiry which have appeared in the daily press contain several inaccuracies. We are, however, enabled to give a statement of the real facts of the melancholy case. The deceased was a surgeon named Wimberley, and he was admitted into the asylum in the middle of May last, suffering from the early symptoms of general paralysis, with attacks of violent mania. He was restless and violent to an extreme degree, combative, and altogether most unmanageable, one of his first adventures being the sudden reception of two blows in the face from another patient with whom he quarrelled. On the 20th of May it was reported to Dr. Schofield, superintendent of the asylum, that Mr. Wimberley had something the matter with the chest, and, on inquiry, Dr. Schofield discovered that two or three ribs were fractured, but the extreme restlessness and wandering of the patient made the examination most difficult. The chest was duly bandaged, but the patient persisted in tearing off all the dressings, and it was with the utmost difficulty that any protection to the chest could be kept in position. He soon, however, was about again, and appeared in his usual state, the mental affection remaining unchanged. On the 10th of July the patient was visited by his brother, Dr. Wimberley, of Coventry, who thought him better than on his previous visit. On the 13th he was reported to Dr. Schofield by Mr. Pugh, the assistant medical officer, as being very ill, and as having a swelling on the breast. Dr. Schofield, on examination with the exploring needle, discovered an abscess near the sternum, out of which abscess he let escape, by incision, two ounces of unhealthy pus. On further examination with a probe Dr. Schofield also found that the abscess was connected with a fracture of the sternum. At this time the patient had vomited his breakfast, and, as it came out in evidence, he also vomited soon after some dark fluid. He became prostrate, continued to vomit, the vomit in the afternoon being of coffee-ground character, and in the evening of the day he sank and died. The post-mortem, made by the coroner's order, revealed fracture of the sternum, fracture of several ribs, some in various stages of repair, and peritonitis. At a second post-mortem, made under the direction of the friends of the patient, a further account of fracture of the ribs was recorded. An ulcer in the posterior part of the lesser curvature of the stomach was discovered, and a recent fracture of the skull was presumed to be discovered, but this last discovery had to be given up on further inquiry. A third post-mortem was afterwards made by Dr. Lees, who confirmed the evidence relating to perforating ulcer of the stomach, and who also confirmed the existence of fracture in the sternum and ribs, but with the explanation that the evidence of the date of all the fractures was not very clear, and that some of them were unmistakably fractures that had occurred before the patient entered the asylum. The questions put before the jury were embarrassing, and the inquiry, which was repeatedly adjourned, was exceedingly tedious. The proprietors of the asylum were most ably represented by Mr. W. H. Michael; Mr. Channel represented the Commissioners in Lunacy; and Mr. Pike the friends of the deceased. Mr. Pike strove to prove that the cause of death was collapse from repeated injuries inflicted in the asylum. The defence was that the immediate cause of death was peritonitis from perforating ulcer of the stomach; that the fractures of the ribs were connected with disease of the bones incident to general paralysis; that the ribs had been progressively fractured during considerable periods of time, and that the fractures were disconnected with the immediate cause of death. The argument in defence, based on all the facts of the case, was simply unanswerable, and the forced hypothesis set up by the witnesses who tried to prove that the peritonitis was from violence, and not from perforation of the stomach from natural causes, was, as it deserved to be, a signal failure. The cause of the fractures formed a very important feature of the inquiry. On the evidence of two of the inmates of the asylum, both of them patients, the deceased, on the 19th of May, was thrown down by a keeper named Smith, and was kicked on the chest by him; but this evidence was not tendered by the witnesses until long after the supposed event, and it was denied point-blank by Smith, who seemed to attribute some injuries to a fall from a table, which the patient by his own act produced on the 19th of May. The patient himself affirmed he had been kicked, but was not clear by which attendant. In the end the jury found that the patient died from natural causes—namely, from perforating ulcer of the stomach and peritonitis, and that his death had been accelerated by violence, but when or where committed they were unable to determine.

The case is one which naturally has given rise to much public feeling. To us the elements of it are simple enough. The evidence is clear as any evidence can be that the immediate cause of death was peritonitis from ulceration of the stomach, and was dissociated from the fractures that had been received. The fractures were such as occur sometimes in the insane from much slighter causes and violences than in sane persons, while the peculiar violence and recklessness of the patients themselves render them exposed to injuries the more readily. What the injuries were in Mr. Wimberley's case we, like the jury, are unable to gather from the conflict of the evidence. We only know that in all the great institutions for the care of the insane, accidents of this kind do happen, in spite of the best judgment and every precaution.

FEVER AT SOUTH KENSINGTON.

IT having been hinted that the statements which we made, in support of Sir Henry Cole's allegation, that fever was chronic in some parts of South Kensington, were not founded on fact, we beg now to show that our conclusions were perfectly justified. South Kensington is included in the Brompton registration sub-district, the population of which in 1871 was enumerated at 28,000, and for the present year it is estimated at 37,000; the increase of the population is therefore 9000 in five years. The deaths from diseases of the zymotic class in 1874 amounted to 57; in 1875 they increased to 87; and for the first seven months of this year, on the authority of the medical officer of health, they are 55, which, continued at the same rate, will give 94 deaths for the twelve months. Now if we estimate the population in 1874 at 31,000, then the death-rate from zymotic disease stands at 1·8 per 1000; and taking the population in 1875 at 34,000, then the death-rate from zymotic disease would be 2·4; whilst in 1876 the death-rate from the same cause would be 2·5. But will the death-rate for the second half of this year continue at the same ratio as for the first half? Judging from the experience of the two preceding years, we hardly think that it will. In 1874 the deaths from zymotic diseases in the first half amounted to 21; those in the second half to 36. Again, in 1875 the deaths in the first half were 34, those in the second half 53;

therefore an increase of the present rate may not unnaturally be looked for in the second half of this year, in which case the rate per 1000 will also be increased. Even without such natural increase the rate for the present year is in excess of that for 1874 and 1875. It appears, therefore, that the zymotic death-rate of the South Kensington district is steadily increasing, and this increase is in advance of the estimated increase in the population. Surely this fact should engage the serious attention of the Kensington Vestry. Again, a death-rate from zymotic diseases of more than 2·0 per 1000 is absurdly high for such a suburb as South Kensington, containing, as it does, such a large proportion of mansions and wealthy inhabitants, and the causes of which should certainly be inquired into. Lastly, the Vestry has declared that no deaths this year have occurred from typhoid fever in South Kensington (one death has been registered), but they have not informed us that in 1874 thirteen deaths were registered as fever, and last year nine from the same cause. Now, what do these figures represent? Dr. Murchison gives the mortality per cent. among all the typhoid cases admitted into the London Fever Hospital during twenty-three years as 17·2, or 1 death in every 5·79 cases. This average is undoubtedly extremely high, for Dr. Murchison states that at the London Fever Hospital "every patient admitted with enteric fever and dying in the hospital has been registered as a death from enteric fever, although death may be due to some sequel months after recovery from the primary attack; that many abortive cases, all of which recovered, have been registered as 'febricula,' and not as enteric fever; whilst a large proportion of the slighter cases were never brought to the hospital at all." But granting this high rate of mortality to have existed in South Kensington, then in 1874 there would have been seventy-five, and in 1875 fifty-two cases of fever in the district. But if the rate of mortality did not reach this outside limit, as there is no reason to suppose it did, then the number of cases would be proportionately increased. Still the fact that in a fashionable and wealthy London suburb, at the lowest estimate, from fifty to seventy cases of typhoid fever have occurred in two successive years is most alarming, and completely justifies the remarks made by Sir Henry Cole and the comments we have made.

SUMMER HEAT AND INFANT MORTALITY.

THE Weekly Returns of the Registrar-General afford the means for observing the effect of temperature upon urban mortality in a population of about seven millions of persons living in twenty of the largest English towns. The rate of mortality in England is usually low during May and June, and again between the middle of October and the end of November; the highest death-rates invariably prevail during the cold of winter and the heat of summer. During the last four weeks of June, the annual rate of mortality in the twenty large English towns above alluded to, averaged 20·2 per 1000, whereas during the four weeks ending the 12th instant, the average rate in the same population had risen to 26 per 1000. The deaths recorded in the second period exceeded those in the four weeks ending July 1st by 3093; this excess may be almost exclusively referred to the unusual summer heat which prevailed during the greater part of July. In these returns the deaths in the twenty towns are classified in three age periods—under one year, one and under sixty years, and over sixty years. The deaths of infants under one year of age, which were 2562 in the twenty towns during the four weeks of June, rose to 5815 in the four weeks ending the 12th instant, showing an increase of 3253 deaths of infants. This excess was greater by 160 than the excess in the deaths at all ages, because the deaths recorded between one and sixty years of age showed a decline of 119, and those of persons aged upwards of sixty years was less by 41. It thus appears that whereas intense summer heat more than doubles the rate of mortality among infants under one year of age in large English towns, it causes no increase in the death-rate of persons aged upwards of one year; indeed, as we have seen, the deaths at these ages in the four weeks ending the 12th inst. were 2 per cent. less than during the four weeks of June, before the advent of the high temperature. The excess of deaths at all ages in these twenty towns during the second period of four weeks, due to heat, was 3253, and the increase in the deaths referred to diarrhœa was 2893. We thus arrive at two important facts with reference to the increase of mortality in English towns caused by the recent high temperature. The whole of the increased mortality occurred among infants under one year of age, and 89 per cent. of the increase was referred to diarrhœa. These two conclusions considerably narrow the field of speculation as to how the excessive mortality due to heat may be controlled. It is simply a question whether this annual summer epidemic of infantile diarrhœa can be prevented or more successfully treated. This is a subject worth all, and more than all, the attention which it is now beginning to receive.

THE ANTISEPTIC METHODS.

LISTER'S method is obtaining increasing attention both in the British Isles and abroad, though it cannot be said that it is as yet universally adopted. At least, judging from London, it is found that in some hospitals faith is weaker than in others, and there are certain groups of surgeons who adhere to the old system. Germany has adopted Lister's method with enthusiasm, but in France they are very lukewarm. For some time past a method bearing some analogy to Lister's has been warmly advocated by M. Alphonse Guérin, who is as anxious as the Edinburgh professor to exclude air in its ordinary condition from wounds. To attain his end, M. Guérin, as is well known, dresses wounds with thick layers of cotton-wool; and he believes, with Professor Tyndall, that the wadding arrests the germs and allows *pure* air to reach the denuded surface. The layer is left a long time, and when removed exposes a healthily granulating wound. This practice has been carried on by himself and others for several years with great success, but has not as yet been generally adopted. Now it so happens that the author has in the Academy of Medicine a colleague who is his namesake. His Christian name, however, is Jules. M. Jules Guérin is well known in the surgical world as the inventor of the subcutaneous method in various operations. His great anxiety to exclude the air led him to introduce what he calls his pneumatic method. This consists in placing a stump, after amputation, into a bag from which the air has been drawn, and here again we are told of successful cases. In all the three methods to which we have alluded, suppuration is either very slight or does not occur at all. Here, however, arises a question of priority. The elder Guérin (he is between seventy and eighty) taxes the younger with having simply copied him and being quite innocent of a discovery. The younger, in a speech before the Academy, retorts sharply, and shows that his system has nothing to do with pneumatic occlusion, and that he considers the air, when properly purified, a very wholesome agent. The question of dressing wounds is, no doubt, a difficult one; but it is plain that much has been gained within the last few years. All the three inventors wish to exclude germs—Mr. Lister by means of powerful antiseptic fluids and careful occlusion, M. Guérin (senior) by excluding the air altogether, and M. Guérin (junior) by entangling the germs in his cotton-wool layer; and last

(and perhaps not least) come those who trust to the open dressing of wounds, to cleanliness, rest, and proper attention to the general health of the patient.

THE EARL OF BEACONSFIELD.

"YOUTH is a blunder; manhood a struggle; old age a regret." The author of these words, written many years ago, has lived to give them a practical denial, so far, at all events, as is implied in the last sentence of the epigram. Mr. Disraeli is now in his seventy-third year, and has just accepted the highest honour that a Commoner can receive from his Sovereign. People may, and very frequently do, scorn the dull respectability and the prosy deliberation of the Upper House (albeit that the debates have been lately somewhat livelier by the importation of new blood). But an earldom is a fit and proper, as well as a noble, reward for a man who has in political life gained his ground inch by inch, until the day came when, as he himself predicted, the House of Commons did hear him, and that in no ungrudging spirit. He has been the foremost figure of the Conservative party for the last thirty years, and during the greater part of that time its acknowledged leader. Since the present Government came into office he has succeeded marvellously well in uniting in both Houses the old Tory party and the more Liberal Conservatives, and has at the same time increased indirectly to a very great extent the influence and sympathy of the Upper House in all affairs relating to the social, as well as the commercial, prosperity of the people. The action of the Prime Minister has, in fact, been to popularise the Lords in a very great degree. For ourselves, we cannot say, in spite of the motto with which he entered office, that Mr. Disraeli has done very much for the profession or for public health. The performances have not, at all events, equalled the promises. But, putting political proclivities entirely aside, we are glad to join our contemporaries in recording the bestowal of an earldom upon a Minister so eminently calculated to adorn an atmosphere with the denizens of which his admirers have always intuitively connected him.

OSSEOUS LESIONS IN INFANTILE SYPHILIS.

IN a recent number of the *Archives de Physiologie*, M. Parrot briefly sums up the results of his observations into the condition of the osseous system in infantile syphilis; maintaining the lesions described to be among the most constant of any of the manifestations of that disease. Starting sometimes in intra-uterine life, they occasionally do not appear until some days, weeks, or months after birth. These affections are grouped by M. Parrot under four heads, according to the degree in which the bones are involved. The long bones of the limbs, scapula, ilium, and the cranial bones, are those which most frequently suffer; the ribs, clavicles, metacarpal and metatarsal, and lastly the vertebræ, are more rarely attacked. The lesions are always symmetrically disposed. Those of the *first degree* are observed in the fœtus or in children dying a few days after birth. The affected bones are covered by a layer of osteophytic growth, which in the long bones is sometimes so great as to give the bone double its normal diameter. There is thickening also of the epiphysial cartilage. In the *second degree* the layers of new bone are less compact, and are limited usually to the lower extremity of the shaft of the humerus, the upper end of the radius, anterior surface of femur, and inner aspect of tibia. At the same time, the cancellous tissue undergoes a gelatiniform atrophy, which begins in small centres of softening of a yellowish or reddish-yellow colour; the process extends later to the compact tissue, and last of all invades the layer subjacent to the epiphysial cartilage. The syphilitic pseudo-paralysis of the new-born is due to this osseous degeneration. The *third degree* occurs in older infants. It is marked by a sort of hypertrophy of the medullary substance, which encroaches on and finally replaces the osteophytic production of an earlier date. It is most marked usually in the lower third of the humerus. The *fourth degree* is characterised by the appearance of spongy tissue at the periphery and extremity of the shaft of the bone. Occurring in infants more than six months old, the lesions may pass into and be mistaken for those common to rickets. The rachitic changes, however, are never met with under six months of age; whereas it is just in those earliest periods of infantile life that the osseous changes of hereditary syphilis are most marked.

THE HEALTH OF HEREFORD AND THE POLLUTION OF THE WYE.

THE beauties of the river Wye, if they do not belong to the British tourist, are, at any rate, a source of pleasure to all English lovers of river scenery at home. The fact, therefore, that the cathedral city of Hereford, with a population of nearly 20,000 inhabitants, still empties its sewage into this river without any attempt at purification, or even subsidence, has a far more than local interest. We must, indeed, confess to some difficulty in repressing a feeling of satisfaction from the knowledge that the residents of the city of Hereford are discovering, in an unpleasant manner, that this simple but savage method of sewage disposal has become an intolerable nuisance to themselves, and a source of the gravest danger to their health. This discovery is more likely to lead to reform than æsthetic considerations for the lovers of river scenery, or sympathy for the health of down-river residents, or the success of pisciculture. Hereford has recently been again suffering from a somewhat severe epidemic of scarlet fever, and in the report of the local medical officer of health for the quarter ending June last, it was pointed out that the disease assumed "the malignant, diphtheritic, and fatal type" in those parts of the city near the sewage outfall, and where, through defective drainage, stagnant water existed. Mr. H. V. Sandford, the medical officer of health, in the report in question, remarks of the sewers that "as far as they have been laid they are good and well laid, and only require attention to flushing and trapping, with ventilation pipes, to make them perfect and healthy." Judging, however, from a voluminous correspondence upon the subject in the local press, it appears to be generally acknowledged that the gradient of the city sewers is too low for a satisfactory drainage system, even with attention to flushing. Then, with regard to the sewer outlets, the medical officer of health has no hesitation in pronouncing that they are "endangering the health of the inhabitants," the flow of the river being insufficient (fortunately for those living below Hereford) to carry away the soil. At a spot where a considerable increase of deaths has taken place, the medical officer of health found "a bank of partially broken up feculent and other decomposing vegetable and animal matter." Other spots are referred to in this report, especially Castle Green pond, the nature and unhealthy state of which was pointed out "two years ago," where the "odours of stinking water were perceptible," and where scarlet fever assumed a malignant and diphtheritic character. The city appears to be without any hospital accommodation for infectious diseases, and even the infirmary has no special wards for such cases, scarlet fever patients being, it is said, treated in the same ward with patients suffering from non-zymotic diseases. It is time that public interest in sanitary matters should be thoroughly awakened in Hereford. Whether the system of

water carriage for the sewage be retained, and some form of filtration or purification be adopted, or whether some dry system of sewage disposal be substituted, is of secondary importance. The present state of things should no longer be tolerated.

THE YEOVIL BOARD OF GUARDIANS AND EXTRA OBSTETRIC FEES.

THE majority of the Yeovil Board have acted like gentlemen, and in a spirit of justice to their medical officer, Mr. Garland. A certain minority of the Board have acted in another spirit, which we shall not characterise, but which makes it a matter of regret that they should be administrators of the Poor Law, which, whatever its faults, provides extra fees in difficult cases for medical officers. Mr. Garland was sent for by a midwife to see a poor woman who had been delivered of a child, but not of the placenta. This was retained, and, we presume, adherent. Some hours had elapsed since the birth of the child. Mr. Garland completed the delivery, and very properly made a charge of £2 under the 183rd article of the General Consolidated Order. This gave the minority of the Board the opportunity of being disagreeable. The relieving officer had said that when Mr. Garland came the woman was delivered, and they preferred the statement of the relieving officer on a matter about which he knew nothing to that of their medical officer. They would not allow the fee without requiring the presence of Mr. Garland at an adjourned meeting. When he came he was kept waiting for a time in the vestibule among the paupers, and other small incivilities were practised. But in the end the Board fully vindicated the medical officer, and allowed him £2. There is a peculiar indelicacy of feeling in requiring a medical officer to establish a statement concerning the third stage of labour against the statement of a relieving officer, and, with Captain Haslin, we sincerely trust that in future the Yeovil Board will take the opinion of its medical officer in confinement cases in preference to that of the relieving officer. Mr. Garland's opponents on this occasion measure professional services by the length of time they occupy, not by the skill with which they are discharged, or the slight fact that a human life has been saved.

VACCINATION.

THE letter addressed by the President of the Local Government Board to Mr. Serjeant Simon, which our readers must have read in the daily papers, effectually disposes of the plea for a new inquiry, but we cannot help regretting with *The Times* that a Minister should have sunk his dignity by answering such "petty and unfounded criticisms." It would be as reasonable to appoint a commission to investigate the use of quinine in intermittent fever as the value of vaccination as a prophylactic measure against small-pox. The only anxiety of the moment is to secure the due enforcement of the law without the glorification of anti-vaccinators by over-much prosecution. The spectacle of half a dozen guardians arrested and conveyed to prison for disobeying a *mandamus* of the Queen's Bench Division is not pleasing, and it is apt to be misunderstood. Thoughtless people may be misled by prejudiced or mischievous agitators so far as to suppose these obstinate local dignitaries were incarcerated because they cling to a harmless crotchet. That is not the truth. The seven guardians of Keighley went to gaol because they broke the rules of discipline and disobeyed their superiors. When an officer in any service, naval, military, or legal, defies the orders issued for his instruction by those in authority over him, the law of sound government requires that he should be coerced. The question what he should have done or left undone is not raised. The single point of issue is, Has he broken the rule of discipline? If so, he must be punished. An order given by a superior authority removes responsibility from the agent. It is his duty to obey implicitly, or, if the rules of the service admit, resign. Pure vanity and wilfulness involved these seven unwise men in their troubles, and they must take the consequences. There is a comic side to everything, and it is strongly brought out in this case by the newspaper report that "the guardians displayed extraordinary coolness during the arrest." Considering the interesting and formal character of the proceeding, it is satisfactory to find that they only put on the air of martyrs so far as to exhibit "coolness" of demeanour. Their conduct has been so absurd and irrational up to this point that, if in adversity they learn the wisdom of sobriety, perhaps they may not hereafter regret that the "persecution" of "might against right" has overtaken them. Meanwhile let them remember that for the local excitement occasioned by the enforcement of the law they are distinctly responsible.

THE EPIDEMIOLOGICAL SOCIETY.

WE are glad to call attention to a useful compilation of Transactions just published by this Society, thus completing the third volume, which latter ranges over a period of ten years—i. e., from 1866 to 1876. The study of epidemic and endemic disease has so very close a connexion with public health that all the articles contained in this volume are most valuable for reference to sanitary officers throughout the kingdom. The part just issued contains, among others, a paper on "Errors in the usual method of investigating Epidemics," by Inspector-General R. Lawson; one on the "Alleged Spontaneous Production of the Poison of Enteric Fever," by Dr. Corfield; "Remarks on the Period of Infection in Epidemic Diseases," by Dr. William Squire, Secretary to the Society; and "Remarks on the Conditions of Propagation of Small-pox and Cholera," by Dr. Leon Colin, Professor of Epidemiology at the Val de Grâce. The volume terminates with a brief account of the proceedings of the International Sanitary Conference at Vienna, held in 1874, by Dr. Seaton, medical officer to the Local Government Board, and one of the British delegates at the Conference. All medical officers of health, particularly those attached to port sanitary districts, should make themselves fully acquainted with the details of this last report, which, as it appears in these Transactions from the pen of Dr. Seaton, is very concisely and explicitly rendered.

ACTION FOR MALPRAXIS.

AN action for malpraxis was tried last week at the Leeds assizes, which is interesting from the side issues on which it turned. A year and a half ago, a miner was severely crushed and injured by the fall upon him of part of the roof of the colliery in which he worked. The surgeon to the colliery, Mr. Walter S. Simpson, saw him shortly afterwards, and found abundant superficial injury, but discovered no fracture or dislocation. Three weeks after, the man found his way into the Leeds Infirmary, where an unreduced dislocation of the hip was discovered and reduced by Mr. Wheelhouse. The patient went to work again a few weeks later, but remained lame, and was assured by a Dr. Wade, of Pontefract, that the dislocation was still unreduced—an opinion which that gentleman expressed in court. All the members of the surgical staff of the Leeds Infirmary were prepared to give evidence that the dislocation had been reduced, and that the head of the femur was still in its place. On such a point the opinion of either Mr. Hey, Mr. Wheelhouse, Mr. Teale, or Mr. Jessop may be taken as

conclusive, and it may be assumed that the dislocation was reduced, as asserted. The fact was undisputed that the dislocation was overlooked by Mr. Simpson. For such an oversight, some excuse was offered, and we think with reason. A dislocation of the hip into the sciatic notch is by no means easy to detect when the whole side and the limb are swollen by the effects of direct violence, and it cannot be held as a grave imputation on the skill of the surgeon that the exact injury escaped notice at the moment. The patient, it appeared, refused to follow the injunctions given as to rest. Instead of keeping in bed, he persisted in dressing, and walked about, keeping the limb in a sling, and so the limb escaped further examination. The oversight was admitted; the point argued was whether the patient's crippled state was to be ascribed directly to the delay in the reduction of the dislocation, and whether the delay had not prevented the reduction altogether. Dr. Wade's evidence in support of the latter opinion was too weak to have any weight, and the case broke down on the expression of an opinion that the delay of three weeks would not and did not interfere with successful reduction, and would not have interfered with the use of the limb had the patient been careful in its employment.

CHLORALISATION.

AN Austrian surgeon, M. Linhart, has communicated to Baron Larrey an account of an interesting case, in which the anæsthesia and muscular relaxation necessary for the reduction of a dislocation of the shoulder were obtained by the intravenous injection of chloral. The patient had inhaled chloroform on two previous occasions, but each time the excitement under the chloroform had been very intense, and much vomiting followed. It was therefore decided to chloralise him. The solution of chloral employed was neutralised by a few drops of carbonate of soda. A gold needle was used, and the utmost care taken to ensure freedom from extraneous particles. The injection was made into the left arm. At the end of fourteen minutes seven grammes of chloral had been absorbed, and anæsthesia was complete. There was not the least reflex movement. The reduction of the dislocation was effected with extreme facility. Absolute anæsthesia continued for half an hour; he was then awaked, and he drank, and then slept for several hours. On recovering there was no nausea or vomiting. Slight defective sensibility continued for twenty-four hours. The vein into which the chloral had been injected showed no trace of irritation or of coagulation.

THE HEALTH OF HANWELL.

AT a recent meeting of the Brentford Board of Guardians at Isleworth, the health and sanitary condition of Hanwell formed the subject of a discussion. Dr. Burton, the local medical officer, had addressed a letter to the guardians, in which he reported that an outbreak of enteric fever had occurred, resulting in thirty-six cases, of which two had already proved fatal. Diarrhœa of a choleraic type was also said to be prevalent. Dr. Burton stated that there was a great scarcity of water in the neighbourhood, and that which could be obtained was quite unfit either for drinking or cooking purposes. Another letter from a local resident described the insanitary condition of the river Brent. There was an attempt to attribute the outbreak of fever to the system of sewage irrigation adopted by the Hanwell Asylum, but the fact that the health of the inmates of the asylum continued satisfactory afforded strong evidence against the probability of such an assertion. The matter proceeded no further than a discussion, as the guardians declared that the subject was one for the consideration of the Hanwell Sanitary Authority, who, it may be hoped, will not ignore their responsibility. The outbreak of enteric fever occurred in that portion of the parish of Hanwell situated in the registration sub-district of Acton, whereas the Middlesex County Lunatic Asylum, usually known as the Hanwell Asylum, is situated in the parish of Hayes, in the registration district of Uxbridge.

THE LEGAL TEST FOR INSANITY.

DR. J. TASKER EVANS, surgeon to the Herts County Prison and medical visitor to Hadham Palace Asylum, in a letter, for which we are unable to find room, again raises the much-vexed question of legal tests for insanity. The point upon which he lays principal stress is the discovery of delusions. The law undoubtedly fails in two regards: it requires, what is not always necessary to the proof of lunacy, some formulated absurdity of belief; and it assumes that no delusion exists if one cannot be found. Dr. Evans complains because his opinion was acted upon in one case at the recent assize, while in another it was treated with scant courtesy, although, as the event showed, he was right and the court and jury were wrong. We do not feel sure that the medical evidence weighed for much in either case. The governor of the gaol was evidently the favoured witness in both instances. This is what must be expected until the question of criminal responsibility is placed on a better footing. We doubt whether that desirable change can be effected until medical science has itself solved the problem in a way consistent with the practical interests of society. It is useless to blow the trumpet louder until it has ceased to give an uncertain sound.

FATAL INFANTILE DIARRHŒA.

WE are glad to see that our remarks on fatal infantile diarrhœa are exciting that attention which the gravity of the subject makes proper. The mortality from the disease is very large. But this is not the only reason for regarding it seriously. It greatly, and sometimes permanently, lowers the vitality of those children whom it does not kill. In our article on the subject we restricted ourselves very much to a consideration of the pathology and etiology of the disease. One of our correspondents, Dr. McKenna, has paid a good deal of attention to the treatment of the disease. Indeed, he is so absorbed in his views on this point, and so well satisfied with them, as to be somewhat intolerant of the labours of others, and even of our own allusions to them. With all respect to Dr. L. Smith, he denies that he, or anyone else, can make one important addition to our knowledge of the pathological anatomy of the bowel. These are certainly not very gracious terms for one medical labourer to use in speaking of another who has been at the pains of making eighty-two post-mortem examinations, and of giving a very careful analysis of the morbid appearances. These appearances, despite the paper in the Transactions of the Royal Medical Society of Melbourne, "proving diarrhœa to be a simple congestion of the bowel, unaccompanied by any sort or degree of inflammation," showed that in its fatal forms it involved other and much graver lesions—namely, inflammation of the jejunum and duodenum in twelve cases, and of the ileum in forty-nine cases. In eighty-one of the eighty-two cases there were lesions indicating inflammation of the mucous membrane of the colon. Dr. Smith specifies the lesions, whether thickening, softening, or ulceration. But to show how real they were, we may mention that in eighteen cases the mucous membrane of the colon was found ulcerated. Dr. McKenna is absorbed with the question of treatment, especially with the use of cold in every form of administra-

tion. He is supported in this by another correspondent to-day. This is a most important part of the subject, and, by all means, if anyone has anything beneficial to recommend let us hear the facts, but no therapeutic experience can affect the value of carefully recorded pathological observations, which are by no means necessarily to lead us back to leeching, blistering, &c. They may only lead us to be more careful to avoid irritating foods, and to moderate the effects of summer heat in some such ways as Dr. M'Kenna recommends.

THE EX-EMPRESS CHARLOTTE.

NINE years ago Maximilian, Emperor of Mexico, closed his brief reign in the courtyard of Queretaro, where he was shot by command of the late President Juarez, and ever since his widow, the ex-Empress Charlotte, has been a prey to acute melancholia—the paroxysms of which, however, were at first followed by intervals of partial return to reason. In these she was allowed to amuse herself—if amusement be the word for an occupation which turned upon the deepest tragedy—in writing the experiences of her husband and herself in their few months' sojourn in Mexico. This she has long abandoned, and in the château of Laeken, where she is under strict medical surveillance, she has relapsed into confirmed dementia, which her physicians have given up all hope of curing. As in similar cases, she recurs to the predilections of childhood, one of which was a passion for flowers, and, Ophelia-like, she spends most of her time over them, feeding as they do her once lively but now diseased imagination. Their attraction for her was touchingly manifested the other day. Eluding the watch of her attendants, she had fled from the castle, but when overtaken it was found impossible to induce her to return, except by the use of means which would certainly have proved hurtful. One of her physicians bethought himself of her morbid affection for flowers, and by strewing them from time to before her she was gradually lured on her way back to the château, where a closer surveillance has since been placed over her.

HYPERTROPHIC CIRRHOSIS OF THE LIVER.

M. HANOT, in his thesis (Dec., 1875), states that he has made out, by careful investigations at the Hôpital Cochin in Paris, a peculiar kind of hypertrophic cirrhosis of the liver, presenting the following characters: Extra-lobular and extensive cirrhosis without any tendency to retraction of the conjunctive tissue of new formation; and sometimes *intra*-lobular cirrhosis—abnormal development and chronic catarrh of the biliary ducts. Symptomatically it is characterised by chronic jaundice, depending on the obliteration of the biliary canaliculi, and by a considerable hypertrophy of the liver without ascites, or the abnormal enlargement of the subcutaneous veins of the abdomen, which is observed in ordinary cirrhosis. The affection may last a long time, but sometimes ends in the acute malady called "severe icterus." No particular etiology has been made out, nor is there anything reliable respecting treatment.

DIVIDED AUTHORITY IN WORKHOUSES.

THE master of the Cardiff Workhouse Hospital has just given an illustration of the way in which not to deal with matters not under his immediate jurisdiction. Of two prescriptions on a card, the first and not the later one had been made up for a patient. This was a mistake, though not a serious one. The slightest mention of it to the medical officer would have been sufficient to get the matter rectified. And it is strange that any other course should have occurred to the master. But some minds are inventive of wrong courses—as here. He did not even tell the medical officer anything about the matter; but made a report of it to the Board. After considering the question, the visiting committee administered an indirect reproof to the master, and expressed their opinion that "in all questions affecting hospital administration the master should communicate fully and promptly with the medical officer, with the view to the immediate correction of any irregularity that he may observe or otherwise become aware of." We commend this injunction to all masters of workhouses, and assure them that they will find it for their own peace and the welfare of the whole establishment to communicate frankly and promptly with the medical officer on matters of hospital administration. There are indications in other workhouses that masters will not receive the sanction of the Board in treating medical officers with any other feeling than one of respect.

THE WEATHER AND OUR FOOD.

UNDER the influence of the tropical weather we have experienced for some time past people are anxiously speculating as to the suitability of their diet for the unusual heat, and whether it should not be assimilated to that consumed by our countrymen in parts of the world where the ordinary temperature exceeds 90° in the shade. An adoption of some of the customs in vogue in hot climates is, however, to be carefully eschewed. What can be more conducive to heat apoplexy than "brandy panny," and highly curried and seasoned meats, so dear to the Anglo-Indian? Nature points out in this exceptional season that the lightest possible food should be taken, and that in moderation. Very little tea or coffee, plenty of milk, with fish, and but little meat, and that well cooked, and a moderate indulgence in iced drinks are indicated. Spirits and heavy wines, of course, are interdicted. It should be known that frequent and excessive thirst is often aggravated by an injudicious consumption of ice. Such extreme thirst will often be immediately allayed by hot drinks, a fact which has been often verified. It cannot be too strongly insisted on that over-feeding and over-drinking (of any fluid whatever) are most pernicious, especially either before or after prolonged or considerable exertion. The principal meal of the day should be taken at sunset.

REFORMATORY AND INDUSTRIAL SCHOOLS.

THE annual report on this subject just issued shows that there are now 53 reformatory schools in England and 12 in Scotland, which at the end of last year accommodated unitedly 5615 children. A total of 1443 children were admitted in 1875, of whom 1189 were boys and 254 girls. There are also 117 industrial schools which house a total of 11,766. The report now, as always, gives a variety of interesting particulars as to the educational progress made, and other kindred subjects. But it occurs to us that something comprehensive on the sanitary state of each school and schoolship, of which latter there are eight, should be included in this valuable report. The health report is limited to brief remarks, such as "No serious sickness; infirmary empty; only one death occurred, 1874." Remarks of this sort are satisfactory, but when an epidemic of ophthalmia, of typhoid (as in the case of the *Cornwall* last year), or of any zymotic disease, has occurred, a special medical report should be made, giving all the circumstances in detail. Such reports, published under the authority of the Home Office, would be very valuable to all engaged in sanitary work. The machinery for their compilation is ready to hand, and could be easily extended so as to meet any special case.

NATIONAL ORTHOPÆDIC HOSPITAL OF IRELAND.

UNDER the above title a new special hospital has been opened in Dublin. It is somewhat strange that no institution has been hitherto established in that city for the gratuitous relief, and entirely devoted to the treatment, of poor persons suffering from deformity, especially as rickets is said to be more common in Ireland, from unfavourable hygienic conditions, than in the sister kingdoms. There is a dispensary open daily, and the aid afforded is entirely gratuitous. A number of beds will be set apart for the more aggravated cases requiring operation and continued mechanical treatment. The surgical staff includes Mr. Porter, surgeon to Her Majesty the Queen in Ireland, Mr. Smyly, surgeon to his Excellency the Lord-Lieutenant, and is conducted under the personal supervision of Mr. Lambert H. Ormsby, surgeon to the Meath Hospital, to whom the profession in Ireland are indebted for the first work on the subject of orthopraxis that has appeared in that country. We wish the undertaking what it will most require—liberal support.

NEPHRITIC PAINS IN ATAXY.

DR. MAURICE RAYNAUD has attempted to show that in locomotor ataxy, "nephritic crises" may occur analogous to the "gastric crises" to which M. Charcot has called attention. The statement appears to be based on one case only, which alone is not very conclusive. Its details, however, are of interest. The paroxysms of pain were of great intensity, and were at first separated by intervals of perfect health. Afterwards they were more frequent, but not less intense; and ultimately a state of continuous profound "endolorissement" was reached, with grave general symptoms. The character and seat of the pain, the retraction of the testicle, and the diminution in the quantity of urine, present features closely resembling those of calculous nephritic colic. It is distinguished, however, according to M. Reynaud, by the longer duration of the attacks, lasting six or eight days without intermission; the frequent return of the attacks, which occur during several, even six months; and by an entire absence of those changes in the urine which are so constant in calculus. In the case described, sclerosis of the posterior columns of the spinal cord was found after death.

THE "THUNDERER" DISASTER.

ONE officer and twelve men, victims of the late terrible disaster, are still under treatment; at least two of the latter are, we learn, very seriously ill. The medical evidence was taken on Tuesday last, and at its conclusion the coroner availed himself of the opportunity to pay a tribute of praise, which was thoroughly well deserved, to the surgical staff of Haslar Hospital for their conduct.

THE representatives of the late Mr. Southam, of Manchester, have received from the authorities of Owens College an acknowledgment of the handsome bequest, made to the college by the deceased surgeon, of his anatomical and pathological collection, the use of which he had given to the students of the institution during the latter years of his life. Principal Greenwood, in a letter published in the Manchester papers, says, "I cannot forego the pleasure of conveying to Mr. Southam's representatives my personal gratification, not only at the important permanent addition to our museum, but also at the possession of a lasting memorial of one whose official and private associations with me are so warmly cherished; and I know that this feeling is shared by all my colleagues."

ACTING on suggestions received with reference to the propriety of establishing a system by means of which owners of lodging-houses and hotels should be enabled to have their premises inspected and certified if found in a general healthy condition with reference to drainage and other sanitary arrangements, the Council of the Social Science Association have drawn up a report on the subject. The Council approves of the system, but thinks that in the first instance it should be a voluntary one; that the medical certificates should be renewed every three months or oftener if desirable; that a minimum charge should be made for the issue of such certificates; that a register should be kept of the certified houses open to inspection, and that the owners of the houses should be required to exhibit the certificate in some conspicuous part of the house.

THE *Daily Telegraph* recently devoted a leader to the question of the use of alcohol in workhouses, with much of which we quite agree. Our contemporary hesitates to believe that the Local Government Board would exclude from the dietary of the aged sick poor the modicum of wine or spirits which, in many cases, serves to preserve animation in their feeble frames. "Let the experiment be tried on the young and the hale," it is urged, "but in the name of common humanity let caution be exercised ere it is sought to deprive the feeble, the invalid, and the advanced in years of an indulgence to which they may have been accustomed all their lives long, and the sudden withdrawal of which may terminate life itself—much, it may be, to the relief of the rates, but scarcely to the credit of human nature."

THE Act of Parliament to remove restrictions on the granting of qualifications for registration under the Medical Act has just been printed. It enacts that "the powers of every body entitled under the Medical Act to grant qualifications for registration shall extend to the granting of every qualification for registration granted by such body to all persons, without distinction of sex; provided always that nothing herein contained shall render compulsory the exercise of such powers, and that no person who, but for this Act, would not have been entitled to be registered shall, by reason of such registration, be entitled to take any part in the government, management, or proceedings of the universities or corporations mentioned in the said Medical Act."

THE authorities of Whitby are increasing in their efforts to perfect the sanitary condition of their town, the natural advantages of which are admittedly great. We learn from a recently published report of Dr. Taylerson, medical officer of health, that the important measure of dredging the harbour has been undertaken, under the auspices of Sir George Elliot, M.P. Already over 6000 tons of indescribable accumulations have been removed, and deposited in deep water at sea, thus giving increased facility for a large portion of the natural drainage of the town to depart with each recurrent tide.

THE *Pacific Medical and Surgical Journal* records a case in which small-pox was conveyed in a letter from Indiana to California. A resident in the latter State received a letter from a sister in Indiana, announcing the occurrence of small-pox in her family. A few days after, the receiver of the letter became ill, and soon had a well-marked attack of small-pox.

THE small-pox epidemic in Blackburn continues to increase, and it has been found necessary to barricad some of the infected streets, while gangs of men are employed night and day in spreading disinfectants. There are at the present time in one house alone six cases of the disease.

A LAY contemporary states that Dr. Patterson, municipal physician of Copenhagen, has been prosecuting inquiries concerning the diseases incidental to men engaged in the manufacture of gas. The result is somewhat at variance with what has been observed in this country. Dr. Patterson found that death was very rarely the direct result of any process connected with gas making, and that the smells encountered by the operatives exercised no deleterious influence on their health. It was observed, however, that the men were peculiarly susceptible to catarrhs, with considerable irritation of the respiratory tracks.

A PAPER is contributed by Major-General Lord Mark Kerr to the *Indian Medical Gazette* for last month, in which, under the heading of "Sanitary Notes in Poona," attention is directed to the frequent occurrence and formidable character of diseases of malarial type on sites that are, to all appearance, bare rock and devoid of vegetation; and the great advantages to be derived from the ordinary measures of deep subsoil drainage, irrigation, and tree-planting, as far as the health of European troops is concerned, are forcibly pointed out and illustrated.

A REPORT, compiled by Dr. Dugdale and Dr. La Rocque, medical officers of health for the city of Montreal, shows that during the past year the death-rate was about 29 per 1000, and among the French Canadians 40·48 per 1000 of the population. The deaths from small-pox amounted to 13·79 per cent. of the total mortality. A small minority of French practitioners in Montreal are still persistently opposed to vaccination, so that, as a result, about 83 per cent. of the deaths from small-pox occurred among the French Canadians.

THE uncertain tenure under which medical officers of health of combined districts hold office was well exemplified at Okehampton on the 5th inst. The term of appointment of Dr. Blyth (who holds office for the combined districts of Okehampton, Southmolton, Torrington, Dulverton, and Bideford) expires at the end of the current year. His present salary is £550, and an amendment to reduce it to £300 was defeated by a majority of one vote only in a committee of thirty-three members.

A PROPOSAL has been made in the Scarborough Union to erect a pauper lunatic asylum in the parish. The feeling in favour of the project was not unanimous on the part of the board of guardians, but ultimately the clerk was instructed to obtain information respecting the cost of the maintenance of the pauper lunatics from the above union at present located in the North and East Riding Asylums, preparatory to the commencement of the erection of the new asylum.

WE see it is announced by telegram that the physician to the English embassy at Constantinople has given a favourable prognosis of the malady of Sultan Murad. A recommendation was added that the patient should change his mode of life. Nurtured in the indolence and sensuality which mark the degenerate professors of the Moslem faith, the Sultan, although young in years, is a broken-down and worn-out man.

THE managers of the Manchester Royal Infirmary, having considered Mr. Radcliffe's report, are now engaged in erecting three temporary sheds for the reception of patients. The first, which is intended for erysipelas cases, is now ready, and fitted up with sixteen beds. The second building, which will accommodate 64 patients, and the third, supplied with 36 beds, will soon be completed.

PARLIAMENTARY INTELLIGENCE.

HOUSE OF COMMONS.

PRISON DIET.

Mr. CROSS, in reply to Sir E. WATKIN, stated that the diet in Millbank Prison had recently undergone a change, and the question of further changes was still under consideration.

POLLUTION OF RIVERS.

The Bill passed through Committee. Several verbal amendments were made in the earlier clauses.

MILITIA SURGEONS.

Mr. HARDY, in reply to a question, stated that the income of militia surgeons was dependent on too many circumstances for him to say generally whether the new warrant might, in some cases, have reduced their net income by £100 a year. He intended to consider the whole matter, and find out how many were willing to accept the new terms.

MUSEUM OF SCIENCE.

Viscount SANDON, in answer to Mr. READ, said a memorial, signed by many of the most eminent men of science in the country, in favour of the establishment of a permanent museum of science, had been presented to the Lord President of the Council. He was not, however, in a position to say what action would be taken respecting it, but he could assure the House that it was receiving his best consideration.

Medical News.

UNIVERSITY OF LONDON.—The following is a list of candidates who have passed the recent First M.B. examination:—

ENTIRE EXAMINATION.

FIRST DIVISION.—Charles Edward Baddeley, Valentine Matthews, and Howard Douglas Stewart, King's College; Jas. Stanley Newton Boyd, James Percy Alwyne Gabb, George Aldridge George, William Manley Lory, John Edward Neale, Sidney Philip Phillips, Kenneth Rawlings Smith, Neville Scott Whitney, and David James Williams, University College; Charles Alfred Dugnall Clark and William Lenton Heath, St. Bartholomew's Hospital; Mark Percell Mayo Collier and Charles Edward Sheppard, St. Thomas's Hospital; John Charles Saunders Downing College, Cambridge, and St. Bartholomew's Hospital; John Caldwell Uhthoff and Robert Spencer Wainewright, Guy's Hospital.

SECOND DIVISION.—William Stratford Andrews, Frederick Wm. Slater Culhane, Donald Frederick Dymott, Charles Coleman Jewell, Alfred Austin Lendon, John Reynolds Salter, and William Samuel Take, University College; Frederic Haycraft Berry, George Mackern, Herbert Lynsey Manby, George Hannah Russell, and Thomas Stacie Sheldon, Guy's Hospital; John Thos. Faulkner, Owens College; Walter Baugh Hadden and Roger Hughes Jones, Liverpool School of Medicine; Henry Edward Juler, St. Mary's Hospital; Joseph Henry Marsh, St. Thomas's Hospital; William John Notley, B.A., University of Edinburgh.

EXCLUDING PHYSIOLOGY.

FIRST DIVISION.—John William Meek, Guy's Hospital.

SECOND DIVISION.—Frederick Rowland Barker, St. Thomas's Hospital; James Richardson Andrew Clark and Dawson Williams, University College; Richard Hughes, Owens College; George Shaw, Westminster Hospital; John Hinks Vinrace, Queen's College, Birmingham.

PHYSIOLOGY ONLY.

FIRST DIVISION.—William Henry Blake and Charles Henry Cuming, University College; Samuel Thomson Flurabe, St. Bartholomew's Hospital.

SECOND DIVISION.—Alfred Edgar Drysdale, University College and Liverpool School of Medicine; Wm. James Pinkup and James Ryley, University College; Herbert Urmson Smith, St. Thomas's Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on Aug. 10th:—

Griffin, Charles Thomas, Ledbury.
Howat, George Rutland, The Poplars, Bounds-green.
Hudson, James, Maitland-park-road.
Le Page, William, Brandon, Co. Durham.
Morgan, John, Strata Florida, South Wales.
Smith, William, Great Avenham-street, Preston.
Thain, Leslie Lachlan, Devonport.
Wilkinson, Arthur Thomas, King-street, Oldham.

The following gentlemen passed the Primary Professional Examination on the same day:—

Charles Wathyn Cannock and Frederick Rowland Barker, St. Thomas's Hospital; Charles John Ogle, St. Bartholomew's Hospital; Joseph Henry Wilson, University College.

AN American contemporary lately reported a case of immediate death following a uterine injection of perchloride of iron, one part to seven.

WE regret to learn that Mr. John Gilland Hnnter, a surgeon practising in the neighbourhood of Consett, while riding along the highway at night, was thrown off his horse and killed.

WEST BROMWICH, one of the largest and most flourishing of the "Black Country" towns, has received, through the munificence of the Earl of Dartmouth, the lease of a piece of land, fifty acres in extent, at a nominal rent for ninety-nine years, for the purpose of a public park.

AT a recent meeting of the Executive Committee of the National Society for Aid to the Sick and Wounded in War, it was resolved that £20,000 should be devoted to the relief of the sick and wounded of the belligerent armies in the East; that Colonel Loyd Lindsay be requested to act as commissioner of the Society during the war, and that Mr. McCormac, surgeon to St. Thomas's Hospital, be requested to accompany him to the seat of war as surgeon-in-chief of the National Aid Society.

AT the last meeting of the Metropolitan Board of Works a report from a committee of the Board was presented, recommending that the business of a manufacturer of mineral acids, of ammonia, or any of its salts or compounds from gas liquor, be declared to be offensive businesses under the Act, and that evidence on the subject be submitted to the Local Government Board. The same committee also submitted bye-laws for regulating the businesses of a blood-boiler, bone-boiler, manure manufacturer, soap-boiler, tripe-boiler, and tallow-melter, and recommended their adoption. The recommendations of the committee were agreed to by the Board.

APOTHECARIES' HALL, IRELAND.—The following office-bearers have been elected for the year:—President: J. O'Flagherty. Deputy Governor: J. Shaw. Directors and Examiners: Edward H. Bolland, Thomas Collins, John Evans, Arthur Harvey, Charles Holmes, Charles Henry Leet, Charles Frederick Moore, Robert Montgomery, Henry Nolan, Edward O'Neill, George B. Owens, John Ryan, George Wyse. Examiners in Arts: Edward W. Collins, J. Moore. Representative on the General Medical Council: Charles Henry Leet.

BEQUESTS TO MEDICAL CHARITIES.—The trustees of the late Mr. James Baird, of Cambusdoon, Glasgow, have agreed to make the following payments from the sum left at their disposal for charitable and benevolent purposes:—Royal Infirmary, £2500; Western Infirmary, £2250; Eye Infirmary, £250; Ophthalmic Institution, £100; Maternity or Lying-in Hospital, £100; Lock Hospital, £100; Benevolent Society for Relief of Destitute Sick, &c., £100; Convalescent Home, £300; Royal Infirmary Dorcas Society, £100; Samaritan Society, £100; Association for Relief of Incurables, £500; Training Home for Nurses, £100; Association for Providing Trained Nurses, £100; Medical Mission Society, £100; West of Scotland Convalescent Seaside Homes, £100; Ayr Hospital, £300; Kilmarnock Infirmary, £300; Lanark Destitute Sick Society, £50.

Medical Appointments.

BELFIELD, C. W., L.R.C.P.Ed. & L.M., M.R.C.S.E., has been appointed Medical Officer for the No. 3 District of the Bristol Incorporation of the Poor, vice Cooper, deceased.

CANE, H., M.R.C.S., L.R.C.P., has been appointed House-Physician to the Westminster Hospital.

CARTER, A. H., M.D., has been appointed an Extra Acting Physician to the Birmingham and Midland Free Hospital for Sick Children, vice Marshall, resigned.

CLAY, J. H., L.F.P.S.G. & L.M., L.S.A.L., has been appointed Surgeon to the Birmingham Friendly Societies Medical Association, vice Johnston, whose appointment has expired.

DAVIDSON, C., F.R.C.S.Ed., has been appointed Certifying Factory Surgeon for the N.E. District of London, vice Davey, deceased.

FINLAY, D. W., M.D., M.R.C.P.L., has been appointed a Physician to the St. George and St. James Dispensary, King-street, Regent-street, vice Coupland resigned.

GRAY, E., L.K.Q.C.P.I., L.R.C.P.Ed., L.R.C.S.I., has been appointed Consulting Sanitary Medical Officer for the Armagh Urban Sanitary District, vice Davison, resigned.

GOWAN, C., M.D., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Anston District of the Worksop Union, vice McCaskie, resigned.

HAWKINS, F. M., M.B., C.M., has been appointed House-Physician to the Wolverhampton and Staffordshire General Hospital, vice Nankivell, resigned.

HEY, H., M.R.C.S.E., has been appointed House-Surgeon to the Birmingham and Midland Eye Hospital, vice Eales, resigned.

HILL, T., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Middleton-Cheney District of the Banbury Union, vice Dewar, resigned.

JACKSON, W., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Skipton Union Workhouse, vice Birtwhistle, resigned.

MCCREERY, J., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for No. 1 District of the Sudbury Union, Suffolk, vice Marshall, resigned.

MARSHALL, Dr. H. F., has been appointed an Acting Physician to the Birmingham and Midland Free Hospital for Sick Children, vice Sawyer, resigned.

NASON, Mr. E., has been appointed Dispenser to the Birmingham and Midland Eye Hospital.

PLANT, H. W., M.B., C.M., has been appointed House-Surgeon to the Brixton, Streatham, and Herne-hill Dispensary, vice Williams, resigned.

PRICE, W. H., M.R.C.S.E., has been appointed Medical Officer to the Penmachno Slate Quarries, vice Williams, deceased.

SPENCER, J. A., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Ahascragh Dispensary District of the Ballinasloe Union, co. Galway, vice Kerans, resigned.

STONE, W. D., M.D., F.R.C.S.E., has been appointed a Physician to the Western General Dispensary, Marylebone-road, vice Mahomed, resigned.

TREHARNE, J., M.B., C.M., has been reappointed Medical Officer of Health for the Windhill Urban Sanitary District, at £35 per annum for three years.

WALKER, W. N., Jun., M.R.C.S.E. & L.S.A.L., has been appointed Medical Officer to District No. 4 of the Hackney Union, vice Butler, resigned.

WATSON, A. H., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for No. 2 District, and Medical Officer to the Workhouse of the Mere Union, Wilts, and Medical Officer of Health for the Mere Rural Sanitary District, all vice Smith, resigned.

Births, Marriages, and Deaths.

BIRTHS.

AVERILL.—On the 9th inst., at Longton, the wife of Alfred Averill, M.R.C.S.E., of a daughter.

CALDWELL.—On the 15th inst., at Kennington-park, the wife of W. T. D. Caldwell, M.D., of a son.

CHERRY.—On the 7th inst., at Upper Norwood, the wife of William Cherry, L.K.Q.C.P.I., Surgeon-Major, Army, of a son.

HAMMOND.—On the 12th inst., at Nuneaton, the wife of W. Hammond, L.R.C.P.Ed., of a daughter.

MOIR.—On the 13th inst., at St. Andrews, the wife of Surgeon-Major R. Moir, M.D., F.R.C.S., of a son.

PAGE.—On the 7th inst., at Netherfield, Kendal, the wife of David Page, M.D., of a son.

STEWART.—On the 8th inst., at Charlotte-square, Edinburgh, the wife of T. Grainger Stewart, M.D., of a son.

THURSTON.—On the 11th inst., at Ashford, the wife of Edward Whitfield Thurston, L.R.C.P.L., of a daughter.

WALKER.—On the 12th inst., at Rodney-street, Liverpool, the wife of George Edward Walker, F.R.C.S.E., of a daughter.

WHATELY.—On the 12th inst., at Gainsborough, Torquay, the wife of Edward Whately, M.R.C.S.E., of a daughter.

WORSLEY.—On the 11th inst., at Ardwick-green, Manchester, the wife of Henry Worsley, M.R.C.S.E., of a daughter.

MARRIAGES.

LYSTER—DARSIE.—On the 9th inst., at Canning-street Presbyterian Church, Liverpool, C. E. Lyster, M.D., to Marion, daughter to J. R. Darsie, Esq.

MOSSE—MACDONALD.—On the 3rd inst., at St. Michael's Church, Athy, by the Rev. Canon Macdonald, M.A., father of the bride, assisted by the Rev. H. M. Mosse, M.A., Rector of Heage, Derbyshire, brother of the bridegroom, and the Rev. H. F. Macdonald, M.A., brother of the bride, Charles B. Mosse, C.B., Surgeon-Major, to Margaret Celestina, third daughter of the Rev. Canon Macdonald, M.A., Rector of Athy.

WILSON—GRAY.—On the 8th inst., at South Georgeville, Irvine, William Wilson, M.D., to Margaret Elizabeth, daughter of the late John Gray, Esq.

DEATHS.

BUCKLE.—On the 22nd ult., at Douglas, Isle of Man, Thomas Buckle, M.B. aged 35.

CATHCART.—On the 8th inst., at Ballybay, James Cathcart, C.M., aged 63.

DOWNES.—On the 13th inst., at Devonshire-place, Harrogate, after a few hours' illness, William Morton Downes, only child of Edmund and Mary Downes, of St. Mary's-terrace, Paddington, aged 6 weeks and 3 days.

FOX.—At Shortland, Auckland, New Zealand, Alexander Fox, M.D., aged 38.

GRANTHAM.—On the 4th inst., at Falsgrave, Yorkshire, Thomas Payne James Grantham, M.R.C.P.L., aged 62.

HADOW.—On the 9th inst., at Aligurh, N.W.P., India, Gilbert Bethune Hadow, M.R.C.S.E., Surgeon-Major Bengal Service, aged 43.

O'LEARY.—On the 9th ult., at Charlesworth, Derbyshire, Goodwin Purcell O'Leary, M.D., aged 59.

PEAKE.—On the 8th inst., at Colchester, George William Peake, M.D., Staff Surgeon-Major, Army, aged 51.

PEGUM.—On the 2nd inst., at Carrigabolt, Thomas Pegum, L.K.Q.C.P.I., aged 31.

RYAN.—On the 7th inst., at Lonsdale-square, Islington, John Ryan, Esq., M.D., LL.D., formerly Lecturer on Chemistry at the Charlotte-street School of Medicine, Professor of Chemistry at the Polytechnic Institution, and some time Editor of the *London Medical Gazette*, aged 66.

SANGER.—On the 9th inst., at Alfriston, Sussex, Thomas Frederick Sanger, M.R.C.S.E., aged 66.

TOWT.—On the 7th inst., at Crewkerne, George Frederick Ewens Towt, M.R.C.S.E., aged 31.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

DRUGS COLLECTED BY THE PRINCE OF WALES IN INDIA.

MR. J. R. JACKSON, Curator of the museum, Kew Gardens, publishes in the last number of the *Pharmaceutical Journal* a short account of the vegetable products brought home from India by the Prince of Wales. The collection consists of about 180 specimens of seeds, fruits, barks, gums, &c., besides some woods. The best portions are the produce of Southern India, and were arranged and catalogued in Madras. Amongst spices and condiments, several seeds occur that are much used in medicine. The drugs are placed under a distinct head, one of the foremost being the star anise (*Illicium anisatum*), originally a native of South-Western China, whence European commerce is supplied with a large quantity to flavour spirits. In India it is commonly used as a stomachic and carminative, and also with the object of sweetening the breath. One variety is held sacred by the Japanese, who decorate their tombs with wreaths made from it, and burn the bark as incense in their religious rites. There are also specimens of *Toddalia aculeata*, *Cassia absus* and *Vernonia anthelmintica*, *Bambusa arundinacea*, *Strychnos nux vomica* seeds, *Hyoscyamus niger* seeds, &c. The gums and resins present nothing remarkable.

THE correspondence forwarded by *Mr. T. C. Eager* shall receive attention next week.

A CASE OF CATALEPSY.

To the Editor of THE LANCET.

SIR,—On Friday, the 16th of June, I was suddenly called to see a woman, aged twenty-four years, the mother of three children (one of whom was a patient of mine some time back). She was reported to me, if not dead, certainly dying. On my arrival five minutes afterwards, I found my patient lying on the floor, and at first sight apparently dead. Her pulse at each wrist was imperceptible; but on feeling the carotids I could detect pulsation, but it was very feeble. Her limbs were extended and extremely rigid, and a death-like coldness and pallor pervaded the whole body. Her eyes were upturned, and not susceptible to the influence of light; the pupils were normal in size, and the lids were rigidly closed. Her teeth were firmly clenched, and her respiration was extremely slow and feeble, so much so that on applying a looking-glass to her mouth it left no trace, and it was only known to exist by the extremely slight heaving of her breast. There seemed to be complete loss of sensibility, as irritation of the conjunctivæ did not effect them. I could glean very little information from any of the persons in the room at the time, as most of them were neighbours. I could only learn that she was found in the closet in the rear of the house in the condition I have above described, and was removed by a friend to the room where I found her, and where an extemporaneous bed was made on the floor for her. I should have mentioned that she was found at one P.M., and I saw her at two. They informed me that they would have sent for medical advice sooner only that they regarded the case as one of ordinary fits or epilepsy, and so expected her every moment to rouse out of her condition. Finding, however, that there was no frothing of the mouth, clenching of the hands, biting of the tongue, or involuntary passage of urine or fæces, I regarded the case as one of catalepsy—a disease which I had never seen before; for on placing the body, arms, or legs in any position, no matter how awkward or tiresome it might be, they remained fixed. Having satisfied my mind as to the nature of the complaint, I went to my house, which was in the same street as my patient's, to procure some ammonia, chloroform, mustard-leaves, &c., as well as the advice and assistance of my friend, Dr. George Lewis, of the Walworth-road, who happened to have called on me a few minutes before I was sent for. I requested him to accompany me, which he did, and on arrival, without any previous conversation as to the nature of the case, he at once arrived at the same diagnosis. Seeing the apparently lifeless state of our patient, we applied friction to the extremities, mustard-leaves to the calves of the legs, a mustard-leaf to the heart, hot jars wrapped in flannel to the feet, and strong liquor ammoniæ to the nostrils. Having continued these remedies for an hour and a half, we were pleased to see the pulse return at the wrist and the body getting gradually warmer. We then commenced to administer chloroform, and after a short time the body became gradually relaxed. Whilst she was inhaling the chloroform which I gave her, my friend Dr. Lewis, who constantly attended to the pulse, remarked a peculiar characteristic of it—viz., its great variability, one minute being about 70 in the minute, and a minute after over 100. Its fluctuating character was remarkable. After half an hour's inhalation she was attacked with opisthotonos, her body being bent back rigidly until her head almost touched her heels, then there was sudden relaxation of all the muscles, and she gradually came to herself. After she became conscious she had no knowledge of what had occurred, and she complained of great weakness, slight sickness of stomach, and severe headache. I got her to bed, and gave her stimulants and anti-spasmodics. She had been four hours in the fit. She said she had no warning or premonitory symptoms. She had "fits" before she was married, but whether similar or of an epileptiform nature I could not ascertain. Previous to the attack she said for a few days her head felt very heavy, and she felt unusually languid.

I publish this case—first, on account of the rarity of the complaint—a disease of which Sir Thomas Watson says, "I have never seen an instance of perfect catalepsy"; secondly, on account of the fluctuating state of the pulse while in the fit; and thirdly, on account of the beneficial employment of chloroform, which in this case so speedily subdued the spasmodic condition. I may add that there was no uterine derangement.

I remain, Sir, yours faithfully,
WILLIAM F. HINGSTON, M.B., M.C. T.C.D.

Adolphus-street, Deptford, Aug. 7th, 1876.

Medicus in Statu Pupillari.—It might have that primary effect by its impression on the nerve centres. The truth of the suggestion made by our correspondent must remain a matter of conjecture; but the symptoms are not, in our opinion, consistent with an overdose of opium.

Dr. Richard Grattan is thanked.

MEDICAL EVIDENCE AT CORONERS' INQUESTS.

WE are almost daily receiving complaints, involving long explanations o very limited interest, in connexion with evidence given or offered and refused at coroners' inquests. It is impossible to deal with these matters *after* the event, and on the basis of *ex-parte* statements and ordinary newspaper reports. Our correspondents should know that the proceedings at inquests are not usually reported by responsible short-hand writers, but by the same class of "liners" who produce the "graphic accounts of great conflagrations." If medical practitioners, having cases on which inquests are about to be held, or cases of difficulty involving medico-legal questions for reference, will send promptly to this Office a concise statement of the facts and issues, noting the questions on which they desire aid, we shall be always happy to advise them to the best of our ability. More detailed accounts of proceedings may be submitted for publication. This is the utmost we can do. It must be obvious to everyone that to intervene when it is too late to be of use is vain and vexatious. Will Dr. G. be pleased to accept this reply to his communication, with the additional intimation, *repeated*, that it is not within the legal power of a coroner to refuse tendered evidence.

EVULSION OF FOREIGN BODY.

To the Editor of THE LANCET.

SIR,—Cases such as the following occur so very rarely that I think the details may be interesting to the profession.

On the 24th ult., Mrs. M—— consulted me about her daughter, a stout, healthy child, between five and six years of age. She gave me the following history:—For some time the child had been failing in appetite, and complaining of a pain on moving in her right side, not referred to any particular spot, but extending over an area of several inches, and occurring only when the body was sharply turned. In addition to the pain, there was cough, with muco-purulent expectoration occasionally tinged with blood, and slight febrile disturbance at night. I examined the side, but could detect nothing by inspection or palpation; and on applying the stethoscope, a moderate increase in the respiratory murmur, as compared with the opposite side, accompanied by some moist crepitation, was all that I could discover. As the symptoms were not urgent, I prescribed a simple cough mixture, and ordered a linseed-meal poultice to be applied to the side, the mother to report any change that might take place. Matters remained so until the 28th, when I again examined the child, the place having become more tender, and the pain having increased, the patient in the meantime becoming more feverish, when, to my great surprise, I found a swelling, about the size of half a walnut-shell, situated about half an inch below, and the same distance external to, the angle of the scapula. This was soft and fluctuating, and so tender that the little patient would scarcely allow it to be touched. I may remark that from the first no history of any injury could be obtained. I applied a couple of strips of belladonna plaster above and below the swelling, and ordered the poultice to be continued, informing the mother at the same time that I considered the case a serious one. On the day but one following I was again sent for, and informed that the child was very much worse, and requested to come immediately. I went and found that the abscess had burst, and from its centre projected a piece of "trefolium," which I immediately removed, greatly to my patient's relief, and in a few days she was as well as ever, with the abscess completely healed.

The question now arises, Where did the foreign body come from? Could it have been taken into the stomach, and made its exit from the body as described? I cannot conceive it possible that it could originally have been introduced by the lung. The amount of constitutional disturbance during the entire progress of the case was very trifling; in fact, the patient could not be kept in bed, and remained moving about the house as usual. I send you the "foreign body" for your inspection. Perhaps some of your readers may have seen similar cases. I may also add that at my first examination I found the side so tender that no very satisfactory minute examination could be made. The lung is now all right, and the expectoration and cough have entirely disappeared.

Yours very truly,
Emsworth, Hants, Aug. 12th, 1876. WM. BULL, F.R.C.S.

F. G. S., (Lincoln.)—Yes. The experiment with the Eucalyptus globulus is, we believe, now being tried on the Roman Campagna by some monks at Tre Fontana. Whether or not they have obtained much success with regard to the immediate object of their enterprise, they are said at all events to have extracted from the plant an elixir very efficacious as an antidote to the fever for which the locality is notorious the world over.

A. H. D.—1. At Guy's there were 98 new entries last October, and at St. Thomas's 74.—2. Either.

NUMBER OF VESICLES NECESSARY TO PERFECT VACCINATION.

To the Editor of THE LANCET.

SIR,—I have just read an annotation in your issue of August 5th with reference to a suggestion of Mr. J. Prior Purvis, of Greenwich, "that it is desirable to insert in the next amendment to the Vaccination Act a clause legally defining the number of vesicles necessary to constitute vaccination, and fixing four as the minimum number." I heartly concur in that suggestion. I have had the misfortune to hold two appointments as public vaccinator since I commenced practice in different parts of the country. In each of these districts I found it was the custom to vaccinate by three vesicles only. Thus when I commenced to make six punctures, three on each arm, I was met by considerable opposition. This, I may remind you, is a modification of the method employed by one at least of those gentlemen who are specially authorised to give instruction in vaccination, eight punctures being the number in the instance to which I refer. Now, either those who make eight punctures are unnecessarily energetic, or those who make three, or even two, a number which I have seen, are unjustifiably lax in the performance of the operation. Mr. Purvis's suggestion will effectually put an end to these discrepancies, and prevent the unseemly, though pardonable, preference on the part of mothers for the doctor who makes the smallest number of cuts on her child's arm.

Hoping, with your influential support, the amendment will soon be inserted,

I am, Sir, yours faithfully,
Thetford, Aug. 9th, 1876. J. R. CLOUTING.

LATE HOURS IN SHOPS.

WE are glad to see in the recently published Reports of Inspectors of Factories that one of the inspectors calls attention to the evil of late hours in retail shops. He particularly observed late hours to be kept in the shops of drapers, milliners, and dressmakers, and says it would be difficult to say which of the two classes, the employers or the employed, is the most earnest in making complaints of the evil. The argument that the agricultural and manufacturing classes receive their wages late, and can therefore only make their purchases late, does not, in the opinion of the inspector, deserve any weight: "The manufacturing classes are usually paid their wages on other days than Saturday, and always before 6 P.M.; if on Saturday, not later than 2 P.M. On five days a week their work is generally over at 6, and on Saturdays at 2. There is no good reason, therefore, why in manufacturing towns the retail shops should be kept open beyond 9 o'clock. Shortened hours would be an appreciated boon to the numerous and respectable shop assistants." We have frequently in our columns urged the claims of this class of workpeople to greater consideration as regards hours of work. In large towns the health of the young and growing is frequently and permanently impaired from the cause described—a cause which could be obviated without detriment to custom or business.

Dr. C. A. Rayne.—It shall be published soon.

THE NEW ARMY MEDICAL WARRANT.

To the Editor of THE LANCET.

SIR,—Mr. Hardy's gilded bait of £250 per annum to catch recruits for the army medical department is a delusion and a snare, as the first four months of their service will be spent at Netley, where they will receive but 5*s.* per diem (*vide* clause 8). Afterwards they will be sent to India for five years, where they will draw Indian pay as before, and which now, owing to the high rate of exchange and the consequent increase of prices of everything, is worth about *three fourths* of what it used to be. After completing five years in India, they return to England, and get £250 a year, which, after all, is only about £25 a year more than they would have been entitled to by previous Warrants. According to the old Warrants, a surgeon-major, after completing twenty-five years' service, drew £1 7*s.* pay per diem; whereas by the new Warrant he is to receive but £1 5*s.* per diem, as no provision or increase of pay is sanctioned for surgeon-majors others than that they shall receive £1 5*s.* per diem on appointment after five years' service as such (*vide* clause 1); in other words, a surgeon-major in his eighteenth year of service will draw the same pay as a surgeon-major of thirty years' service!

Mr. Hardy very wisely anticipated what not alone the public, but every member of the army medical department has observed, when he remarked that "he had long ceased to endeavour to please everyone." He might have gone further and stated that he feared his new Warrant would please no one, much less the members of the profession.

Only a few advantages are embodied and introduced in this Warrant. The two most prominent are—1st, clause 4, regulating relative rank, pensions, and allowances to widows and families; 2ndly, the decapitation or removal of the seniors at the age of sixty years, thereby clearing them off, and expediting for a few the chances of promotion to the administrative grade. Clause 5 is ambiguous, and by no means necessarily concedes forage to surgeon-majors on promotion; this they are entitled to, without *reservation*, as much as they are entitled to be styled surgeon-majors. Clauses 11 and 13 are illiberal and stingy. Why should a medical officer, above all other officers, be obliged to serve on half pay for a fixed period *without half pay?* Such an anomalous rule, I believe, no where exists in the army, or is applicable to combatant officers, who are not required to risk their lives by encountering disease in all climates, in addition to facing an enemy, as doctors do, and who are ever on *perpetual* duty. Clause 15 will never work, as no medical officer would be fool enough to risk the best ten years of his life to chance the probability of being one of six to be selected for promotion to surgeon-major on completion of twelve years' service, or to be "turned out," which in itself would be enough to damn any young man beginning or seeking private practice. It is to be hoped that the last line in clause 16 will be acted on in its integrity, particularly as there are now some senior surgeon-majors at the top of the list who may be considered eligible for promotion, although they can show but little foreign service. Again, had clause 22 been omitted, it would have afforded universal satisfaction, as it would prevent the possibility of a similar occurrence again taking place which was perpetrated not many years ago to restore the back services of a medical officer who was fortunate enough to be lately promoted over the heads of his seniors.

What has Mr. Hardy done for some of the most deserving and valuable men of the department? I allude to all surgeon-majors over seventeen and under twenty years' service, who have done the brunt of their work. The answer is, absolutely nothing. Undeniably all surgeon-majors now serving over seventeen years full pay service should be conceded the advantages of pay granted to their juniors who are now being canvassed for. Without this being promptly allowed, dissatisfaction will exist. I am in a position to know that the officers of the department at home and in India are most dissatisfied. This state of things has been brought about by Mr. Hardy ignoring just grievances which have existed now for several years.

Yours obediently,

July, 1876. CIVILIAN.

Scotus, (Dundee.)—Sir Robert Sibbald, physician and geographer to Charles II., was born in Fifeshire a few years before the middle of the seventeenth century. The College of Physicians of Edinburgh, we believe, owes its foundation partly to his exertions. Sir Robert interested himself in ecclesiastical questions, and among his works was one on "The Liberty and Independence of the Kingdom and Church of Scotland."

COTTAGE HOSPITALS.

To the Editor of THE LANCET.

SIR,—In reply to your correspondent, "Index," I would recommend his communicating with Daniel Barley Balding, Esq., F.R.C.S., of Royston, Herts, who is the author and founder of an unique cottage hospital.

Yours obediently,

Iliff, Aug. 14th, 1876. MAURICE G. EVANS, M.D.

TREATMENT OF LICHEN TROPICUS, OR PRICKLY HEAT.

THIS troublesome affection is only too well known to those who have had any personal experience of tropical climates. Surgeon-Major Dr. J. G. French, of the Indian medical service, in a contribution to the *Indian Medical Gazette*, after combating the recently advanced pathology as to the seat of the disease being an hyperæmic sweat-duct papule, says that we can cure prickly heat in three or four days by the application of a solution of sulphate of copper. This should be of the strength of about ten grains to the ounce of water, and the solution should be applied daily or oftener by means of a camel-hair brush, or bit of sponge tied on the end of a stick. It is best applied after the morning bath, when the skin has been well rubbed with the towel, and it must be allowed to dry on the skin before dressing. Dr. French states that he has used this application for over thirteen years, and, when regularly and properly applied, he has never known it to fail.

Mr. A. Fernie, (Barnstaple.)—Aitken's or Roberts's Practice of Medicine; Erichsen's or Bryant's Surgery; Meadows's Midwifery; Dr. Wilson's Hygiene, or Dr. de Chanmont's Lectures; Green's Pathology; Paget's Surgical Pathology; Taylor's Jurisprudence.

ON THE STRUCTURE OF THE PLACENTA.

To the Editor of THE LANCET.

SIR,—In your leading article last week, "On the Structure of the Human Placenta," there are several remarks which I believe the writer will sooner or later see reason to modify. In the first place, it is too much to expect that Professor Turner's examination of a single specimen will suffice to settle an important anatomical question when observers with large opportunities have arrived at directly opposite conclusions. Secondly, the concluding remark, "These researches have placed the Hunterian view of the placenta on a new basis—that of comparative anatomy,—for never before had the minute structure of the various forms of placenta been carefully studied and compared," is based on insufficient information. Comparative anatomy has not been neglected in studying the subject, and one writer has said "that as there is no utero-placental circulation in any other animal, it is contrary to all analogy to suppose that such a process takes place in man." Although nearly always engaged in active practice rather than in trying to solve scientific problems, this subject very early arrested my attention, and has occupied a good deal of my leisure. I confess that I am able to see but very little more in what Professor Turner has to say than what has often been said before in support of the Hunterian theory. This theory no doubt affords a comparatively easy explanation of the way in which the placenta is formed—one reason probably why it has met with such general acceptance. Anyone, however, who has studied the subject must feel that there is still a great deal to learn about the formation of the human placenta, and the various changes it undergoes during pregnancy. A true description of the utero-placental relations at the ninth month should enable us to understand the cause and the source of post-partum hæmorrhage, which the Hunterian description does not. Professor Turner admits that the utero-placental arteries are so small that sometimes they can scarcely be seen. How can the rupture of such minute vessels explain the cause of uterine hæmorrhage? Without running the risk of writing too long a letter, I would respectfully refer those interested in the matter to a paper of mine, "On the Anatomical Relations between the Mother and Fœtus," published in THE LANCET of Feb. 23rd, 1856; to a pamphlet on the same subject, published by me in 1859; and also to a paper of mine in the "Obstetrical Transactions," vol. viii., p. 348. In these papers, besides referring largely to the labours of others in regard to many parts of the subject, I have described what I believe will eventually come to be regarded as the correct explanation of the causes and direct source of post-partum hæmorrhage.

I am, Sir, yours very truly,

Upper Wimpole-street, Aug. 14th, 1876. HENRY M. MADGE.

*** Dr. Madge has fallen into an error when he implies that the conclusions arrived at by Professor Turner with regard to the structure of the human placenta are based upon the examination of a single specimen. Such is not the case; and had Dr. Madge carefully read the abstract which appeared in our columns of the lectures delivered last June at the College of Surgeons, he would have seen that they are based on the examination of more than one specimen during even the early period of pregnancy. Indeed Professor Turner describes several pregnant uteri in the lectures referred to. Moreover, he showed microscopic preparations of injected placentæ of lower animals which plainly presented a utero-placental circulation. Some of these are figured in the first series of lectures which are published. It is true that injected preparations of the early human placenta were not shown; but uninjected specimens were exhibited, in which the sinuses filled with blood were distinctly seen, and the fact that these sinuses were demonstrated in such preparations made their presence all the less doubtful. It is quite true that the comparative anatomy of the placenta has been studied for many years in a greater or less degree; but it is equally true that our knowledge of the structure of the placenta in the lower animals was far less full than it is since the researches of Ercolani and Turner. Imperfect as our knowledge of this subject still is, yet we think that the advances recently made fully justify our concluding remarks. It was not our intention to discuss the question of post-partum hæmorrhage; but we do not think that the occurrence of such hæmorrhage militates against our view of the structure of the placenta.—ED. L.

Dr. Tibbits.—The correspondence which Dr. Tibbits has forwarded to us is too long for publication in our columns. It quite confirms his statement of the treatment to which he has been subjected by the Medical Committee of the Children's Hospital, Great Ormond-street.

Mr. C. G. Wheelhouse is thanked.

Psychiatros.—The present position of clinical instruction in mental diseases in Germany is satisfactory, and yearly tends to become more so. Clinics in the higher or more scientific sense of the word are in full operation at Berlin, Vienna, Breslau, Strasburg, Würzburg, Graz, Bâle; and others are in contemplation at Königsberg, Heidelberg, Munich, and Leipzig. The student has means of medico-psychological observation at Berne, Zurich, Vienna, Prague, Innspruck, Erlangen, Göttingen, Greifswald, Halle, Jena, and (shortly) at Bonn. But in these latter schools there are no clinics in mental diseases in the higher sense. Theoretically those diseases are systematically treated in special chairs at most of the above-named Universities.

INFANTILE DIARRHŒA.

To the Editor of THE LANCET.

SIR,—I read very carefully your article in THE LANCET of the 5th instant on Infantile Diarrhœa, as it is a subject in which I take a warm interest, and I feel the same difficulty in accepting Dr. Sloane's theory of the disease as Dr. MacKenna expresses in your issue of to-day.

Why, I ask, if Dr. Sloane's theory be the correct one, should we not find acute æstival infantile diarrhœa occurring more as a local disease or epidemic, instead of meeting with it as we do on all hands, but especially in those localities—e. g., thickly populated towns—where the effect of the summer heat must be most fully felt? Again, how is it—supposing the infected-milk-drinking theory to be correct—that we do not find enteric fever occurring among adults in a corresponding proportion? Once more, how would Dr. Sloane's theory account for diarrhœa prevailing among children fed entirely at the breast? for I find it almost, if not quite, as frequently among sucking children as among those brought up by hand or bottle.

It has been my lot always to work in localities where children abound literally in swarms, and thus I have been enabled to make more or less continuous experiments in treating their diseases, more especially the one now under consideration. I can safely endorse Dr. MacKenna's remarks on the value of cold in these cases. I invariably order ice in large quantities, as well as frequent sponging with cold water; and I also direct that all nourishment (if the children are not sucking) and even medicine shall be thoroughly iced.

I cannot say that I have ever tried the effect of cold without any medicine at all; but I have frequently found cases which have seemed to be safely on the road to convalescence suddenly relapse, and in almost every instance I have found that the friends have discontinued the ice, either on account of a deficiency in the supply, or because they thought it was no longer necessary. On continuing the ice, the diarrhœa has almost invariably disappeared. Another benefit derived from the use of ice is the relief of that incessant vomiting which is so distressing to witness in the little sufferers.

I certainly think that Dr. MacKenna has hit the mark in attributing the diarrhœa to congestion of the bowel, and I may add that I believe the vomiting to be, in like manner, dependent upon congestion of the stomach.

I am, Sir, your obedient servant,
F. ERNEST POCOCK, M.R.C.S.E., &c.

Golborne-road, Upper Westbourne-park, Aug. 12th, 1876.

A. B., (Liverpool.)—We are not acquainted with any place where portions of injected tissues can be obtained. Our correspondent should inject them for himself. The only other work besides those mentioned by our correspondent is Rutherford's Outlines of Practical Histology (Churchill), which is full of useful hints. We believe that a new book on the same subject will shortly be issued by Smith and Elder.

MILK.

To the Editor of THE LANCET.

SIR,—Permit me to endorse the valuable suggestions of Mr. Weekes on the subject of milk in your issue of August 5th. Like your correspondent, I believe that there is often more in freshly-drawn, unadulterated milk than the water, fat, casein, sugar, and salts detected by ordinary analysis, and that, in addition to mere nutritive value, the supposed pure fluid, in its uncooked state, may be a powerful agent for good or evil on the minds and bodies of the young, to whom it is the chief, and often the sole, article of diet.

The following illustrations are parallel to that given by Mr. Weekes of the probable effect of milk on the constitution of the child taking it:—The first five children of a certain family, in physique, complexion, temperament, and mental attributes, all very closely resemble their mother, by whom they were suckled. The sixth child, suckled by an active, short, plain-looking, rough-skinned, coarse red-haired woman, is strikingly like his nurse in all the above particulars; whilst both parents are quite the reverse. The seventh child, suckled by a tall, slight, fair nurse, with lightish red hair and blue eyes, resembles her nurse in these characteristics, none of which belong to the parents.

Now, if human milk may convey healthy peculiarities, as of form, feature, temperament, &c., that of cattle is equally likely to be a vehicle for the transmission of peculiarities of disease or constitutional defect, as e. g., scrofula. Considering the dark, close byres in which many of the dairy cows of large towns are fastened up without exercise or sunlight for several months together, it is scarcely to be wondered at that tubercular disease prevails to a considerable degree in such places, as I am assured is the fact. Given a case of pulmonary tuberculosis in an ill-ventilated cow-byre, if there be any truth in the theory of the communicability of phthisis, the danger of the other cattle becoming affected is considerable. That the milk of tuberculous cows is a means for the dissemination of the various forms of scrofula among children will, I believe, in time be acknowledged.

The proper remedy for the evils connected with the milk-supply of towns is to license the byres and dairies (like the slaughterhouses), to place them under proper regulations (similar to those recently proposed for the metropolitan sheds and dairies), and to provide for their systematic inspection.

The subject of milk in relation to diathesis presents a wide field for practical observation and scientific research.

I am, Sir, yours &c.,
HENRY E. ARMSTRONG, M.R.C.S.,
Newcastle-on-Tyne, Aug. 8th, 1876. Medical Officer of Health.

B. A., (Manchester.)—The average of all the workhouses in the kingdom gives a dietary of about 3½ oz. of flesh-formers, and 8½ oz. of carbon daily. A prison dietary of the first class is considerably higher than this. In the Irish prisons it is very low. The greater the variety in a public dietary, of course the better.

TWO CASES OF TRIPLETS.

To the Editor of THE LANCET.

SIR,—Dr. Clayton, my employer, informs me that he has been in practice for twenty years without having had a case of triplets, and having had two so recently I shall feel obliged if you will insert the following cases.

CASE 1.—On the 23rd of January last I was sent for to attend Mrs. B—— in her sixth pregnancy. On my arrival at 2.15 P.M., I found the os fully dilated, the membranes ruptured, and the funis descended, a hand and shoulder to be felt. I at once turned and delivered the patient of a male child, still-born. I then examined, and found the chest presenting. I again turned, and at 2.30 delivered her of a second male child, living. A third, likewise a boy, was born at 2.50, feet presenting. The placenta came away readily, and was of enormous size. The children were all well formed. Of the last two, one lived six weeks, the other two months. Mother did very well.

CASE 2.—I was sent for this morning, August 1st, at 3 A.M., to go a long distance to see the wife of Mr. P——, seven months gone, who had been in labour about twelve hours. I found the os dilating rapidly. After rupturing the membranes, the funis descended, and I found the side presented. I immediately proceeded to turn, and delivered her of a still-born female child. A second, also a female child, living, was born in twenty minutes after, breech presenting. I then examined, and found the placenta filling the vagina. On placing my hand on her abdomen, I was convinced there was another child. The placenta came rapidly away, and I found the membranes of another child presenting, which I ruptured, when one foot and hand immediately presented themselves. After putting back the hand, I brought the feet down, and delivered her of a still-born son. The placenta, which was separate from the former, containing only one insertion of the funis, came away, and all was over. There was very little hæmorrhage during labour. The whole was completed within two hours after I arrived. She is doing very well. I am, Sir, yours &c.,

Accrington, Aug. 1st, 1876. J. TORRINGTON, Assistant-Surgeon.

EPILEPTIC CONVULSIONS AFTER LABOUR.

To the Editor of THE LANCET.

SIR,—In Mr. Bower's report (in your last impression) of a case of Epileptic Convulsions after Labour, with Albuminuria, treated with subcutaneous injections of chloral hydrate, there are some errors and omissions I shall feel obliged if you will allow me to correct.

His description of the case and its treatment up to the time I saw the patient is, doubtless, correct. I was requested to see Mrs. C——, in consultation with Mr. Bower, on Sunday morning, June 25th. She was in a comatose and apparently dying condition; tongue enormously swollen and protruded; no power of swallowing. She had had convulsions every twenty minutes, without intermission, from about four o'clock the previous evening. Having recently had a case of epileptic convulsions treated with chloral hydrate subcutaneously with excellent results, when other means had failed, I decided to try it in this case, and, with Mr. Bower's approval, I injected four grains with marked effect, the next convulsion being slighter in character. Another fit threatening in thirty minutes, the injection was repeated, and evidently controlled it. I injected another four grains in an hour, and the convulsions entirely ceased. I saw her again in consultation with Mr. Bower on June 26th, 27th, 28th, and 30th, and on July 1st. The subsequent treatment, as described, was carried out under my direction, and Mrs. C—— (who is an old patient of mine), and who is staying here under my care, is progressing favourably, though there is still a trace of albumen. I have no doubt the injection of chloral hydrate controlled the convulsions, and led to the recovery of the patient, who was pronounced to be in a hopeless condition. I shall be glad to hear the experience of anyone who has used it under similar conditions. Care should be taken when the injections are made, as they leave a nasty slough.

I am, Sir, yours truly,
W. C. WATSON, M.R.C.S. Eng.,
Chester, Aug. 14th, 1876. Honorary Surgeon, Chester Infirmary.

TREATMENT OF ULCERATED LEGS.

To the Editor of THE LANCET.

SIR,—The question of "Nemo" in your last issue, asking for reference to some paper he has forgotten relative to the treatment of ulcerated legs, illustrates the advantage of a "digest," which has been the work of my professional life. By its aid I can refer to any treatment, case, theory, lecture, &c., of interest that have been recorded in the chief medical journals during the last twenty-five to thirty years. Your correspondent will find the information he requires by referring to Mr. Cowen's paper, on Sealing Ulcers with Chalk Paste, in THE LANCET, vol. ii., 1872, p. 705; also Spender's Chalk Ointment (THE LANCET, vol. i., 1873, p. 623); Potassio-tartrate of Iron Dressings (*Medical Times and Gazette*, vol. i., 1870, p. 430); Pannas, Use of Hypochlorites (*British and Foreign Medico-Chirurgical Review*, April, 1874, vol. i., p. 533); Skey, Pollock, &c., Value of Opium (THE LANCET, vol. i., 1855, p. 119; vol. ii., 1871, p. 849); Hancock, Oil of Turpentine Internally (THE LANCET, vol. i., 1846, p. 233, 366); Fayrer, Oil of Turpentine Internally (*Medical Times and Gazette*, vol. ii., 1871, p. 547); Hamilton, Cutaneous Incisions (Braithwaite's Retrospect, vol. ii., 1874, p. 299); Fernie and Nunn, Galvanism (THE LANCET, vol. ii., 1866, p. 94: vol. i. 1854, p. 259).

Such are a few out of a vast multitude of valuable papers and cases bearing upon "Nemo's" question. Yours obediently,
RICHD. NEALE, M.D. Lond.

Boundary-road, St. John's-wood, Aug. 15th, 1876.

To the Editor of THE LANCET.

SIR,—If "Nemo" will refer to THE LANCET of Oct. 16th, 1875, he will see the treatment of ulcers, by Mr. R. Clement Lucas, of Guy's Hospital, by the local application of chloral. Since reading it I have invariably followed his treatment, and never found it fail even in the worst cases.

I am, Sir, yours faithfully,
August 12th, 1876. J. S. G.

A NEW EXPLANATION OF FATAL INFANTILE DIARRHŒA.

Tweedside objects to Dr. Sloane's explanation of fatal infantile diarrhœa, and thinks we must look for other causes more patent and reasonable than cows drinking water contaminated with sewage. If this theory has any foundation, he thinks that fodder cut from pastures irrigated with water impregnated with town sewage would be a more likely cause. His explanation of fatal infantile diarrhœa is, however, we confess, less plausible than Dr. Sloane's, and will be despised by Dr. MacKenna. "Tweedside" attributes it to the use and abuse of perambulators; and secondly, "to another objectionable innovation for which he has the greatest horror"—viz., the modern habit of exposing new-born infants without any covering on the head. We suspect that fatal infantile diarrhœa is older than either of these innovations.

THE BIRMINGHAM IMPROVEMENT SCHEME.

THE Select Committee of the House of Commons have confirmed the provisional order of the Local Government Board with reference to the adoption of the Artisans and Labourers' Dwellings Act in the borough of Birmingham, and have declined to make any modification of the details with a view of meeting the objections of a petitioner against the Bill, who applied that his property might be excepted from the scheme.

A Subscriber, (Lancashire.)—No.

L.F.P.S., &c.—Some simple rules on the subject were drawn up some time ago by a Committee of the Obstetrical Society. Information is given on the following points:—Suckling; how a nursing mother or wet-nurse should be fed; mixed feeding, when the mother has not enough milk; and weaning and hand-feeding.

Mr. A. R. R. Preston.—We would advise our correspondent to insert a general advertisement.

Junior Practitioner.—It does not follow that there should be any extra risk in the case.

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Pollock, London; Mr. Wordsworth, London; Dr. Tibbits, London; Dr. Evans, Hertford; Messrs. Harston, London; Surgeon-Major Barker, Nagpore; Mr. Robertson, Glasgow; Messrs. Wright and Co., London; Mr. Beefield, Bristol; Rev. A. J. D'Orsey; Dr. Griffiths, Sheffield; Mr. Gurner, London; Mr. Morton, London; Dr. Hingston, London; Dr. MacKenna, London; Dr. Madge, London; Mr. Wigglesworth, London; Mr. Brock, London; Dr. Dale, King's Lynn; Mr. A. Tweedie, London; Dr. Evans, Cardiff; Mr. Monaghan; Mr. Grubb; Dr. Aldowie; Dr. De G. Griffith; Mr. Bull, Emsworth; Mr. Seaton, Nottingham; Mr. Wheelhouse; Mr. Barkas, New South Wales; Dr. Liddon, Taunton; Mr. Freer, Rugeley; Mr. Hay, Hull; Mr. Davidson, Hackney; Mr. Barton, Dublin; Mr. Aitcheson, London; Mr. Ryall, London; Mr. Harrison, Liverpool; Mr. Newton, Sheffield; Dr. Finny, Dublin; Dr. Grattan, Dublin; Mr. Cane, London; Mr. Watson, Chester; Mr. Eager, Woking; Dr. Duncanson, Edinburgh; Dr. Rayner, Eccles; Mr. Leech, Woolpit; Mr. Blyth, Barnstaple; Mr. Harriot, London; Mr. Lewes, Whitehall; Dr. Monson, Canonbury; Mr. Fernie, Barnstaple; Mr. Garnett, London; Dr. R. Neale, London; Mr. Anderson, Middlesborough; Dr. Dudson, Buxton; Dr. Hall, Sheffield; Mr. Walker, Hackney; Mrs. Longmore, Woolstone; Mr. Ormsby, Dublin; Mr. Thin, Edinburgh; Dr. Burder, Bristol; Messrs. Robinson and Scott, Edinburgh; Mr. Kimpton, London; Mr. Lindsay, Aberdeen; Dr. Hawkes, Alton; Messrs. Leader and Sons, Sheffield; Messrs. Kerbey and Co., London; Mr. Henry, Dalston; Dr. Sanger, Alfriston; Dr. Macnab, Bury St. Edmunds; Messrs. Keith and Co., Edinburgh; Mr. Horder, Cardiff; Messrs. Hewlett and Co., London; Mr. Sergeant, London; Mr. Bland, Frome; Mr. Simpson, Pontefract; Rev. G. Bartle, Liverpool; Dr. Calwell; Mr. Morehose, Glasgow; Mr. Hodgson, Birkenhead; Mr. Miller, Tasmania; Mr. Payne, Calcutta; Mr. Bond, Salisbury; Mr. Bridgeford, Oundle; Mr. Ashenden, Hastings; Dr. Clement Dukes, Rugby; Cholera Morbus; R. Z.; J. R. T.; A Subscriber; J. S. G.; The Military Secretary, India Office; The Director-General Army Medical Department; Tangier; F. J. C.; Medicus in Statu Pupillari; Strix; Junior Practitioner; M.D., F.C.S.; J. B. A.; A. B.; Enquirer; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—M. Baillière, Paris; Surgeon-Major Beath, Fermoy; Mr. Burns, Rochdale; Mr. Taylor, Romsey; Mr. Tomlinson, Oundle; Mrs. Vyvyan, Plympton; Mr. Smithson, Liverpool; Mr. Brickwell, Amersham; Dr. Moir, St. Andrews; Dr. Fraser, Kilsyth; Mr. Solomon, Falmouth; Messrs. Savory and Moore, London; Mr. Gryde, Ipswich; Mr. Tilsby, Bursiem; Mr. Hall, Derby; Mr. Hole, Tiverton; Mr. Force, Exeter; Mrs. Boydon, Stockport; Mr. Gutteridge, Maldon; Dr. Crowther, Tasmania; D. B., Manchester; R. A., Derby; P. E. C., Horsham; Oxoniensis, Wantage; M. P., London; Medicus, Birmingham; W. R., Chard; M. D., London; T., Bradford; X., Caldecote; Sigma, Blackhill; Medicus, Dublin; C. V. B.; D. E. F.; W. C. T.; Balfe; Medicus; C. J. B., Belper; Nemo, Bristol; D. C., Guildford; Medicus, Banbridge; C. H., Sheffield; P. T., Manchester; Mark, London; Lambda; A. B., Torquay; G. G., London; S., Oundle; Delta; A. B., London; R. W., London; J. E. M., Sheffield; Medicus, Dover; J. F., Hastings; N.

Western Morning News, Newcastle Chronicle, Liverpool Observer, Cork Constitution, Hastings and St. Leonard's News, Manchester Guardian, Pioneer, North Daily Guardian, Sheffield and Rotherham Independent, Record, Hour, Liverpool Post, Southport Daily News, and *Hastings and St. Leonard's Independent* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, AUG. 17TH, 1876.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8 A.M.
Aug. 11	30·378	E.	59	64	108	78	54	...	Bright
„ 12	30·238	S.E.	63	69	115	84	56	...	Bright
„ 13	29·942	S.E.	68	72	120	94	64	...	Bright
„ 14	29·946	WSW	68	73	120	93·5	64	...	Bright
„ 15	30·058	W.	68	75	115	92	65	...	Bright
„ 16	30·058	S.E.	67	72	111	84	67	...	Overcast
„ 17	30·062	E.	62	66	113	84	60	...	Fine

Medical Diary for the ensuing Week.

Monday, Aug. 21.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, Aug. 22.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Aug. 23.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARK'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Aug. 24.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Aug. 25.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Aug. 26.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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